



SAKARYA
UNIVERSITY

2014 **INTE**

**INTERNATIONAL
CONFERENCE ON NEW HORIZONS
IN EDUCATION**

www.int-e.net

**June 25 - 27
2014
Paris, FRANCE**



**Proceedings Book
Volume 1/5**

ISSN: 2146-7358

Venue: Hotel Novotel Paris Est, PARIS, FRANCE



SUNY Korea
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Korea Program
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Foreword

Dear Guests,

Welcome to the 5th International Conference of New Horizons in Education-2014 in Paris, France. "The International Conference of New Horizons in Education (INTE)" is an international educational activity for academics, teachers and educators. It promotes development and dissemination of theoretical knowledge, conceptual research, and professional knowledge through conference activities, workshops, discussions and conference proceeding book. The International Conference of New Horizons in Education-2014 aims to diffuse knowledge and research findings among academicians and lead to professional development and scholarly practices in educational sciences.

For this conference, we have gathered in Paris to share and construct knowledge, to promote dialogue across academic differences, to further and deepen connections within our scholarly community, and to be in fellowship with friends and colleagues old and new. This year, INTE-2014 has received about 1300 applications. The Conference Organizing Committee has accepted approximately 900 abstracts and the conference features over 750 presentations, including 620 oral, 86 poster, and 42 video presentations in 8 conference halls and with more than 165 sessions, representing the breadth and depth of education research today.

This year we have participants from more 60 different countries representing five continents, with different races, gender, ethnic backgrounds and cultures.

We would like to wish you a pleasant stay in Paris and a successful conference. We hope that we will meet again at the International Conference of New Horizons in Education, 2015 in Barcelona, Spain next year.

Thank you for your contribution for the success of International Conference on New Horizons in Education 2014.

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A brief overview of the teaching case method in Brazil

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Abstract

The teaching case method helps develop how to articulate a point of view and defend your arguments. As one of its main goals this method promotes critical thinking and encourages discussion in the classroom. Thus, this work seeks to stimulate the debate on teacher and student interaction through the presentation of the methodology of teaching case as a possible alternative to streamline the education of business administration in Brazil. To achieve this aim this article begins by presenting the teaching case method, followed by a brief history of the case method in Brazil. This work was conducted through literature review in articles, books and journals.

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Peer-review under responsibility of the Sakarya University.

Keywords: Teaching case methods; case study; Brazil.

Introduction

The courses in Business Administration have developed rapidly in Brazil. In 1944 was created the center Fundação Getúlio Vargas (FGV) in order to develop research and teaching in the area of business management. In 1952, FGV founded the first school of public administration in Brazil and Latin America, the Brazilian School of Public Administration - EBAP. In 1954, the School of Business Administration of São Paulo is created - EAESP (Castro, 1981). The evolution in education draws attention, according to the Brazilian Ministry of Education (MEC), in 2012 there were 1,554 high education courses in Administration and this is the course most searched by students in the country, with a total of 833, 04 enrollments.

Along with the rapid development of higher education courses in this area, brings to the fore concern among educators regarding teaching methods currently used in the country.

According to Nicolini (2003) is prevalent in the universities the traditional education that places the teacher as the sole holder of knowledge, however, this methodology does not develop in students the critical thinking about the issues addressed and place them just as a spectator of theories and problems that are presented.

The teaching case method helps develop how to articulate a point of view and defend your arguments (Roberts, 2001). As one of its main goals this method promotes critical thinking and encourages discussion in the classroom. Thus, this work seeks to stimulate the debate on teacher and student interaction through the presentation of the methodology of teaching case as a possible alternative to streamline the education of business administration in Brazil.

To achieve this aim, besides this introduction, this article begins by presenting the teaching case method, followed by a brief history of the case method in Brazil. This work was conducted through literature review in articles, books and journals

The Teaching Case Method

The origin of the teaching case was at Harvard Business School; according to data provided by the school site the main goal of this method is to bring the corporate world in a more real way for the student. When it approaches reality, the teaching case develops managerial skills to manage and lead organizations.

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Through the cases, the student can experience similar situations to those found in business environmental, but without running the risks that are related to decisions to be taken in the real world. Nunez (2003) reinforces saying that the teaching case method meets four basic principles of learning: encouraging innovation, active participation, feedback and learning transfer.

According to Roesch (2007, p 214), this method aims to a) develop knowledge, skills and attitudes considered keys to managerial success; b) familiarize students with the organization and its environment; c) illustrate lectures.

This method brings to the educational environment the market practice therefor stimulates students' thinking and encourages discussion.

The teaching cases are sorted by Böcker (1987) into two categories according as they are used in the classroom:

(1) Case-statement: it is used to illustrate lectures to demonstrate the correct management practices that have been used in a given situation. It is the simplest type of cases the situations are presented and then is not required a more complex analysis.

(2) Cases-problem: It is the type most complex and complete case. Associated with the method developed at Harvard where learning occurs in an inductive process and students are urged to identify management problems, discuss possible solutions and weigh the advantages and disadvantages of each.

Besides the two types of cases cited above Gil (2004) classifies another type the: Case - analysis. In this category students are asked to analyze cases and their variables in order to relate them to the problems. It is intended to develop the analytical ability of the student.

Abell (1997) lists ten characteristics to be considered to build a good case (1) to contain one or more managerial issues to be confronted. and selected through discussion; (2) The case must tackle a subject relevant to the area, there must be a fit of the case with the audience, educational needs, and needs in practice; (3) To provide discoveries that allow the students to recognize and differentiate symptoms of more fundamental problems; (4) To raise controversies that provide different interpretations, decisions and action plans; (5) To contain contrasts and comparisons; (6) To allow participants to generalize lessons and concepts from the case for other situations; (7) To contain appropriate data to deal with the problem, such as product description, industry, people involved data and quantitative data; (8) To contain a narrative with a personal touch because they include the speech of participants and the description of formal and informal organizational processes; (9) is well structured and easy to read; (10) is short, contain a maximum of eight to ten pages of text and up to five pages of annexes.

At the end of each case it must contain the teaching notes that are written by the author of the case to be used by a teacher in the classroom. These generally are not published with the case and should contain the following elements: (1) a summary of the case; (2) the data sources; (3) the educational objectives; (4) alternatives to the analysis of the case; (5) questions for discussion in the classroom; and (6) the recommended bibliography to support the discussion.

Based on Cappel & Schwager, (2002) the teaching notes are a very important part of the case and should be prepared with a special attention. In this part of the case the author will provide guidance to the teacher in how to lead the discussion with the students, in addition through the teaching note is possible to identify if the case is adequate and could add knowledge to the subject that is being taught.

2.1 The Teaching Method in Brazil

In the 1970s the Central Brasileira de Casos (Brazilian Central of Cases) was created with three diffusion poles: The COPPEAD Institute of the Federal University of Rio de Janeiro, the Federal University of Minas Gerais and the Federal University of Rio Grande do Sul. In 1983 it was launched a manual for cases elaboration (Manual de Elaboração de Casos) based on the work of Erskine and Leenders (1973). This center operated during the 1980s and then was deactivate. (Roesch, 2007, Iizuka, 2008).

Despite the scarce number of Brazilian authors that produce teaching case, the interest has increased with the proliferation of courses in Administration and due to the search for methods of active learning.

Since 2007 the National Association of Post-Graduate Studies and Research in Administration – ANPAD accepts the submission of teaching cases for your most significant Congress, the Annual Meeting of the National Association of Post Graduate Studies and Research in Administration (EnANPAD). The Journal Revista de Administração Contemporânea –RAC (Journal of Contemporary Management) has a special section dedicated to them.

A bibliometric study developed by Faria & Figueiredo (2013) analyzed the publications of teaching cases during the period 2007-2011 at EnANPAD, EnEPQ (Teaching and Research in Administration & Accounting Meeting) and in the Brazilian journals with high impact until B2 according to CAPES classification.

The result confirms the small number of publications of teaching case in Brazil as shown the table below:

Table 1: Teaching Cases Published in Education Journals and Annals of Congress in Brazil

Congress and Journals	Number of teaching cases published
Annals of EnANPAD 2007	24
Annals of EnANPAD 2008	18
Annals of EnANPAD 2009	11
Annals of EnANPAD 2010	17
Annals of EnANPAD 2011	8
Annals of EnEPQ 2007	0
Annals of EnEPQ 2009	12
Annals of EnEPQ 2011	12
REAd (Electronic Journal of Business Administration)	1
RAC (Journal of Contemporary Management)	19

Source: Adapted from Faria & Figueiredo (2013, p.185)

The authors found that in 2007, when Anpad accepted for the first time teaching cases on its main congress, EnANPAD, the cases represented 2.5% of total papers accepted for presentation and subsequent publication in the Annals of Congress. After this year until 2011 the publication of teaching cases decrease. In 2011 the cases represented only 1% of the total published papers at EnANPAD.

Regarding the congress EnEPQ, in 2009 was published 12 cases representing 14.5% of total papers. In the 2011 the cases represented 12% of total approved articles.

In Brazilian academic journals, publication of teaching cases is still very scarce. Only two of the most important journals published teaching cases during this period REAd published only one case, while the RAC published 19 teaching cases.

Conclusions

This paper aims to stimulate the debate on teacher and student interaction through the presentation of the methodology of teaching case as a possible alternative to streamline the education of business administration in classrooms. Based on several authors (Roberts, 2001, Roesch & Fernandes, 2007, Wang & Wang, 201, Gil, 2004) the teaching case is a powerful methodology for business administration classes, once it makes possible to establish a link between the learning environment and the real world of organizations, favoring the development of cognitive skills in the students through analysis, synthesis and judgment, encouraging them to be active protagonists in the learning process.

Despite the importance given to this method in the literature and in other countries such as United States where recognized universities applies the method in a regular basis, in Brazil it's still very scares the author and published paper with this method.

For future researches it is proposed to investigate the reasons why the teaching case method is not popular in Brazil. It is suggested interviews with students, professors and Journal editors would be.

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INTE 2014

A case study of music-based program in Samsung Group's executive education

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Abstract

This case study examines the types and effectiveness of music-based program used by Samsung Group for executive education. The author designed and taught music-based program to newly promoted managers, assistant directors, and directors at Samsung for seven years (2004–2010), analyzed the program, and obtained the following results. (1) Music-based program content was used increasingly in emotional intelligence education courses for executives. (2) In music-based program, video lectures and recital-and-interpretation lectures generated better educational performance among trainees than did general lectures. (3) Participants responded more favorably to recital-and-interpretation lectures than to video lectures. (4) In the recital-and-interpretation lectures, preferences for music genres (classical, popular, local, etc.) and instrumental compositions of classical music (strings, winds, etc.) varied depending on trainees' positions and occupations. Finally, the study presents hypotheses on improving the emotional intelligence of executives and improving organizational performance through music-based program.

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Peer-review under responsibility of the Sakarya University.

Keywords: executive education, emotional intelligence education, music-based program, recital-and-interpretation lecture, three phases of music education

1. Research content and method

This article discusses the types and effectiveness of music-based program. The case used here is the music-based program as part of an emotional intelligence education program that was held from 2004 to 2010 by Samsung Group's Human Resources Development Center.

Samsung Shared Value Program was developed and designed by Samsung Human Resources Development Center for newly promoted managers, assistant directors, and directors. The emotional intelligence education program was part of the Shared Value Program and was based on cultural and artistic content. A large proportion of the subjects were music, art, plays, and films. It also included humor, exercise (yoga, stretching, dance), and wine. The artistic-cultural programs allowed trainees to experience and participate in performances from each genre. Among the artistic-cultural programs, the music-based programs in the form of recitals and interpretation, which I designed and taught, was most frequently selected regardless of employee position or occupation.

2. The need for music-based programs to improve managers' emotional intelligence

Corporations both domestic and overseas began to pay attention to emotional intelligence as a way to address the complex social and economic situations in the 21st century. Particularly, large global corporations such as Samsung paid attention to the artistic-cultural programs. They found that the artistic-cultural programs would improve constituents' emotional intelligence, which would spread throughout an organization and create organizational emotional competence. In essence, corporate artistic-cultural programs help individuals and organizations develop and practice creativity and emotional intelligence. Music-based programs stimulate people's musical natures and awaken their innate sensitivity.

However, it is difficult to find case studies that explicitly explain music-based programs with executive education. Furthermore, I could not find any studies that would show managers' emotional competence being

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enhanced through music-based programs. Consequently, with the case study described in this article as a basis, one may need to develop a music-based program for executive education. In addition, it is necessary to study the elements of music as stimuli for enhancing managers' emotional intelligence.

3. Theoretical background

I postulate that musical experiences may stimulate managers' emotional intelligence and improve their emotional competence. Specifically, I wish to examine the following postulates: "Emotional intelligence is the ability of a person to accurately understand and control one's own, as well as others', emotions in order to maintain well-rounded relationships. Emotional competence is the capability for a manager to effectively manage the emotional aspect of horizontal relationship among peers and vertical relationship among superiors and subordinates. It also enables positive empathy among team members. The leader's accurate understanding and effective management of constituents' emotional aspect result in successful performance of the organization."

Neff and Citrin (1999) presented 15 common traits of 50 successful leaders who led high-ranking businesses. Of the 15 common traits of these successful leaders, only 3 were related to intellectual or technical competence; the other 12 were related to emotional intelligence, such as attitude or will.

Goleman (1997) grouped necessary components of managers' emotional intelligence into five categories: self-awareness, self-regulation, internal motivation, empathy, and social skills. Further, Goleman, Boyatzis, & McKee (2002) defined practical capability based on emotional intelligence as emotional competence and stated that emotional competence could undergo improvement through learning.³ They also argued that a manager could improve her or his emotional competence by enhancing relatively weak areas among the five components of emotional intelligence.

Song (2000) reported that experience with music positively affected Goleman's five components of emotional intelligence. According to her, one can improve "self-awareness" and "self-regulation" by understanding one's own emotional states and learning to express negative sentiments in more controlled ways through one's responses to the music. In addition, because the general population is not familiar with classical music, joy is intensified when listening to classical music because of the delayed satisfaction and anticipation, which are obtained instantly with pop music. Therefore, one can acquire "internal motivation" by experiencing worth and expression through educational programs based on classical music. Finally, one can acquire "empathy" and "social skills" by experiencing shared feelings and joy through music that symbolically expresses many different feelings and thoughts.

4. Case Study: the music-based program as a part of Samsung Group's executive education

Many Korean corporations have begun to provide education and development programs to their managers and employees. These programs include self-development, job training, collective training, and experience management, as well as programs that develop emotional intelligence.

Samsung Group is one of the pioneer in adopting emotional intelligence education. Samsung Group's Human Resources Development Center (HRDC) invited me to design a music-based program in 2004.⁴ I accepted the invitation, and designed the music-based program for Samsung Group's executive education. My program was offered to newly promoted managers, assistant directors, and directors of Samsung Group of 18 affiliated companies in 2004. The program has become an annual event until 2014 for 11 consecutive years. I was given the responsibility of designing and teaching the program from 2004 to 2013 for 10 consecutive years.⁵

When I was designing the music-based program for Samsung HRDC for the first time in 2004, I decided to use the 3 phases of music appreciation,⁶ i.e., listening, feeling and understanding, as a means for the trainees to catch the 4 elements of music. In essence, I wanted trainees to go through the 3 phases of music appreciation in order to catch rhythm which would be as either regular coupled with a sense of stability or irregular coupled with

³ Goleman, et. al. (2002) defined emotional competence as the capability for managers to effectively address the various emotional issues that organizations face and to ultimately lead their businesses to success.

⁴ The project was officially contracted to the Gaam, a consulting firm specializing in music-based education. I have been the representative consultant of the Gaam since its foundation in 2003.

⁵ In 2014, the music-based program was integrated into a more comprehensive arts-based program, which HRDC has directly controlled.

⁶ I have chosen the term "the 3 phases of music appreciation," which is originated from the French expression "appréciation musicale," which encompasses not only listening of music, but also feeling through the music being listened, and understanding of the composer's mind from the music being felt.

a sense of instability. Melody and harmony generate trainees' sentiments accompanied by their own memories, such as happy childhoods. Context is the relationship between music pieces and the composers' social and cultural backgrounds. Trainees learn the essence and background of music from the context of the pieces they encounter in their music-based programs.

Then, I developed a set of hypotheses that relate the 3 phases of music appreciation with the 5 components of emotional intelligence as follows: In essence, I wanted trainees to (1) increase self-awareness through "listening" by awakening innate emotions, (2) strengthen self-regulation and internal motivation through "feeling" by bringing the past into the present, and (3) enhance empathy and social skills through "understanding" by connecting with others. Figure 1 graphically illustrates the relations among the 4 elements of music, the 3 phases of music appreciation, and the 5 components of emotional intelligence.

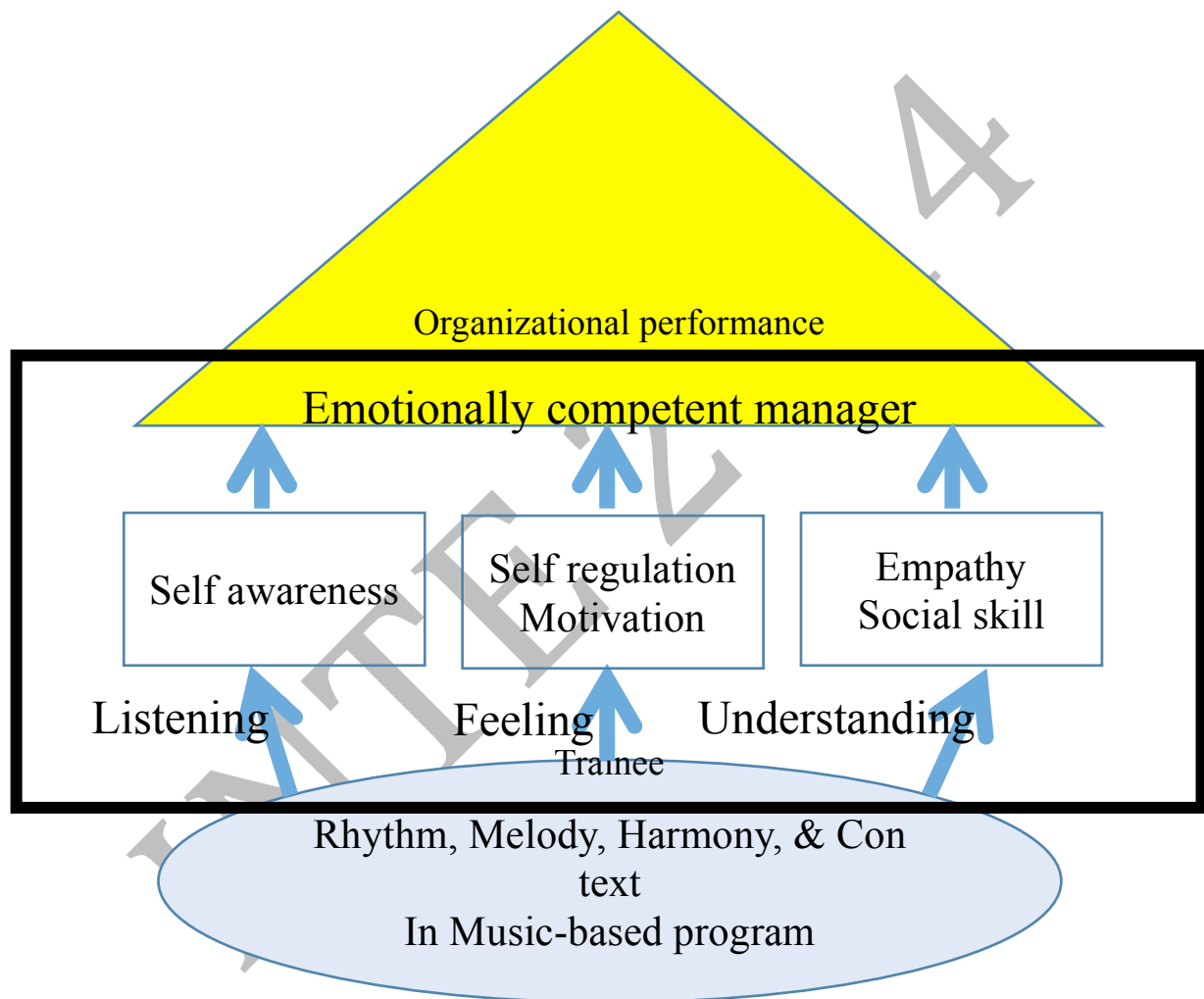


Fig. 1. Listening, feeling and understanding of music as transformers of a trainee's emotional intelligence

The music-based program that I had developed in 2004 became a part of the emotional intelligence education within Samsung Group's executive education. Details of this program is explained below:

4.1 Emotional intelligence education as part of employee education and development at Samsung Group

There are a number of employee education and development programs based on employee position levels and education programs for all subsidiaries of Samsung Group. Each education program includes an emotional

intelligence curriculum.⁷

First, the employee education and development program for the corporation in this case study is divided into the Shared-Value Leadership Program, the Business Leadership Program, and the Global Leadership Program. The Shared-Value Leadership Program is based on employee position levels and is geared toward officers in the first year of their roles. The purpose of the program is to provide clear understanding of leadership and increase organizational cohesiveness. The Business Leadership Program helps mid-level managers improve their management and leadership skills. The Global Leadership Program aims to develop talent for the company's international stage. This case study only discusses the Shared-Value Leadership Program, because it continuously had trainees in a wide range of positions for a number of years.

4.2 Emotional intelligence education in the Shared Value Leadership Program

The Shared Value Leadership Program is for all team members based on employee position level and is offered to managerial employees in the first year of their positions. In the Shared Value Leadership Program curriculum, “attainment” and “others” are included in emotional intelligence education. The purpose of this curriculum is to stimulate emotional intelligence by introducing different arts and to expand knowledge. Before the emotional intelligence curriculum was designed, trainees had to attend a concert to complete the program. However, attending concerts proved to involve many complications, such as scheduling conflicts and traveling, and proved to be ineffective. In addition, the levels of understanding of the concerts and trainee satisfaction were not as high as was expected. For this reason, attending concerts was eliminated from the education program, and three lecture types—regular, video, and recital-and-interpretation—were developed.

The Shared Value Leadership Program for newly promoted managers, assistant directors, and directors consists of four to five days of camp training at a training site with an average of approximately 30 education hours during the period. Of this time, emotional intelligence education lasts for 1.5 to 3 hours. Data was collected from 2004 to 2010, which represented the proportion of emotional intelligence education and the lecture types in the employee education and development program for newly promoted managers, assistant directors, and directors.

4.2.1 The shift in the proportion of emotional intelligence education in the executive education program

The proportion of emotional intelligence education in the employee education and development program was analyzed from 2004 to 2010 based on the education program. The average number of hours for emotional intelligence education for newly promoted managers, assistant directors, and directors in 2004 was 1.28 hours out of 28, or 4.5%, and 2 hours out of 24, or 8.3% in 2010 (Table 1).

The proportion of emotional intelligence education has been equivalent to the original proportion or has gradually increased since 2004. As employee position levels increased, the emotional intelligence lecture proportions also increased. Consistently, 120% more hours were required for emotional intelligence education lectures for newly promoted directors than for newly promoted assistant directors in 2010.

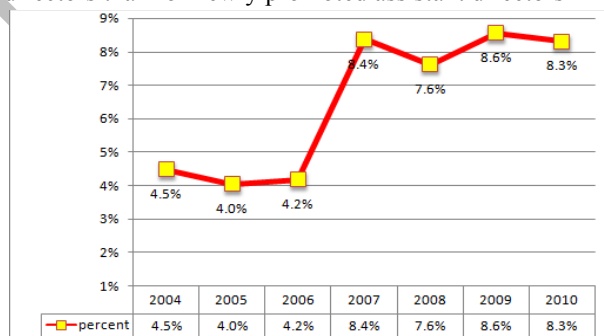


Fig. 2. Ratio of emotional intelligence education to the full education and development program by year

4.2.2 Weight of music-based program in emotional intelligence education

⁷ This chapter is only based on emotional intelligence components from the employee education and development materials of Samsung Human Resources and Development, an education and development institute of Samsung Group.

The curriculum for emotional intelligence comprises artistic and cultural content, including film, arts, humor, health, wine, music, and so on. Trainees are to attend one lecture based on the seniority of their positions, and they do not have the freedom to choose classes. The rate of music-based program⁸ for newly promoted managers, assistant directors, and directors increased from 45.4% in 2004 to 100% in 2010. Music is frequently used as a way to directly stimulate emotional intelligence in executive education.

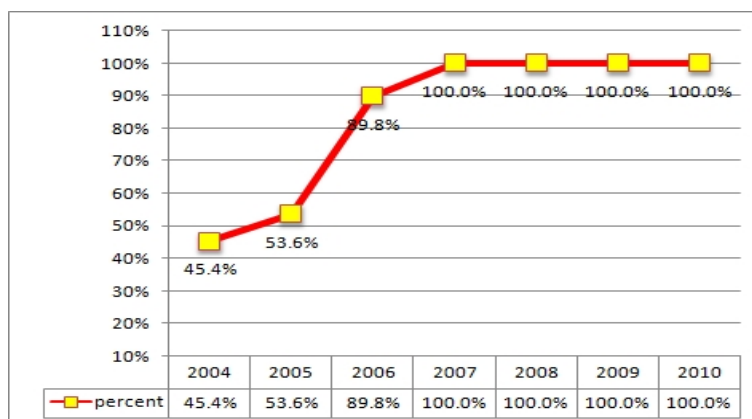


Fig. 3. Rates of music-based program in emotional intelligence education by year

4.2.3 Music-based program lecture types and their proportions in each program

This discussion is the result of analyzing music-based lectures as categorized by the author into three characteristic types: regular, video, and recital-and-interpretation lectures. Regular lectures focused on listening to, describing, and commenting on music. Video lectures are carried out with the use of video materials and media, and typically use vocals or operas. Recital-and-interpretation lectures are carried out with lecturer commentary and live performances. The proportions of the three lecture types in the music-based program for newly promoted managers, assistant directors, and directors were, respectively, 12.5%, 63.2%, and 24.3% in 2004. The respective proportions were 11.1%, 61.7%, and 27.2% in 2005 and 0%, 18.7%, and 81.3% in 2006. From 2007 on, music-based program was taught with 100% recital-and-interpretation lectures. As the music-based program content increased in emotional intelligence education, the lecture type trend shifted from regular lectures → video lectures → recital-and-interpretation lectures.

This shift reflected trainees' preference for recital-and-interpretation education, and it resulted in expanding the variety of recital-and-interpretation lectures. Video lectures were limited to lectures on operas.

4.2.4 Trainee satisfaction with music-based program lecture types

Samsung Group's Human Resources Development Center surveyed trainees on their satisfaction with the music-based program lecture types. For each type of lecture, trainees were asked to fill out a survey with five levels of satisfaction: very satisfied, satisfied, neutral, dissatisfied, or very dissatisfied.

From the survey, the sum of the responses "very satisfied" and "satisfied" was set as the trainee satisfaction score, and the average trainee's satisfaction scores for the three lecture types were calculated from this sum.⁹

In 2004, the trainee satisfaction scores of the newly promoted managers, assistant directors, and directors for the regular, video, and recital-and-interpretation lectures were 87.3, 92.6, and 96.8, respectively; that is, the video and recital-and-interpretation lectures received higher trainee satisfaction scores than did the regular lectures. In 2005, the scores were 71.1, 96.6, and 96.4, respectively, similar to the 2004 scores. From 2006 on, regular lectures were eliminated because of low trainee satisfaction, and the video and recital-and-interpretation trainee satisfaction scores were 96.3 and 97.3, respectively. Furthermore, only recital-and-interpretation lectures were offered from 2007 on, because they received the highest scores, 98.7, 98.9, and 99.1, 98.8 respectively from 2007 through 2010.

⁸ In this study, unlike "music education" to foster musicians, "music-based education" is defined as education to promote musical sensitivity in trainees.

⁹ The emotional intelligence curriculum tended to show high satisfaction levels compared with the other curricula. In fact, support for maintaining the emotional intelligence curriculum in Samsung Group operating education programs scored between 80 and 85 points.

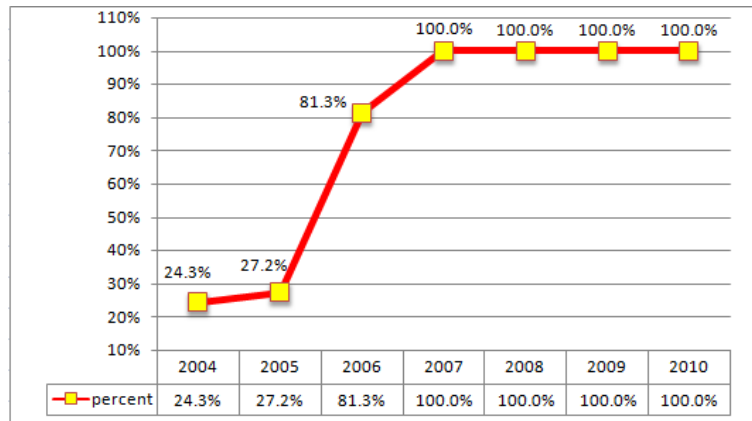


Fig. 4. The shift in the percentages of recital-and-interpretation lectures

4.2.5 The genres and programs of music-based program

Music-based program took place through three different programs, vocal, Korean music, and opera. The genres for the music-based programs for each year were as follows: In 2004, in the last portion of the curriculum for newly promoted assistant directors, lectures on instruments called “A Little Music Recital with a Story” were first introduced. In 2005, a greater variety of music-based programs were introduced, including understanding Korean classical music, classical music from soundtracks, world music, and opera. In 2006, the lectures were on classical music from soundtracks, operas, jazz, and musicals. After 2007, because all of the music-based program was replaced by recital-and-interpretation lectures, the genre taught was 100% classical.

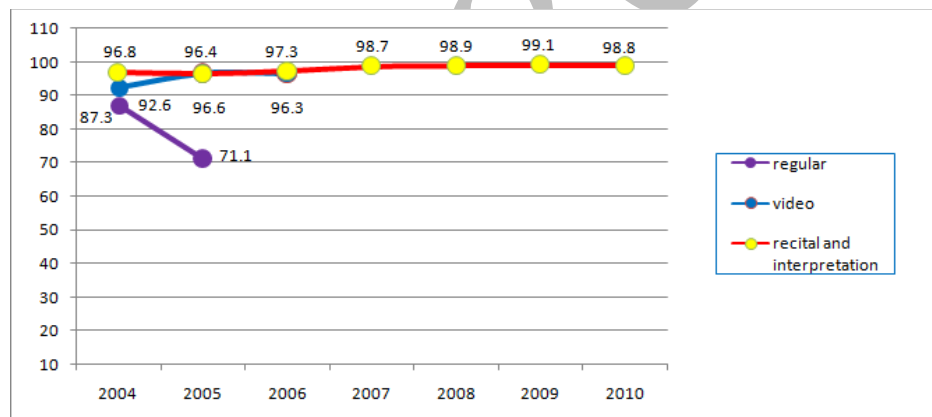


Fig. 5. The shift in trainee satisfaction with the music-based program lecture types

For recital-and-interpretation lectures, only piano trios were introduced in 2004, but the pieces had expanded by 2010 to piano solos and duets (piano and violin, piano and flute, violin and guitar, etc.), piano trios, string quartets, and brass quintets. After 2007, when piano trios had become the main piece, vocals were added.

5. Case analysis: Current state of music-based program operations at Samsung Group

The analysis of music-based program for the education and development of managers, assistant directors, and directors showed that the proportion of emotional intelligence education increased from 4.5% in 2004 to 8.3% in 2010. Moreover, as employee position levels rose, the proportion of emotional intelligence education also increased.

Given that the proportion of music-based program in the emotional intelligence education curriculum increased from less than 50% in 2004 to 89.8% in 2006—and that it has comprised 100% since 2007—the need for and effectiveness of music-based program in executive emotional intelligence education are evident. Particularly as a means to overcome passive employee participation and induce active participation in education and development, music-based program seemed to prove effective.

Among the lecture types, the trend in music-based program was for recital-and-interpretation lectures. Specifically, as the importance of music-based program in emotional intelligence education increased, regular-style lectures were no longer offered and were replaced by video and recital-and-interpretation lectures.

There seemed to be no difference between video lectures and recital-and-interpretation lectures in terms of trainee satisfaction scores. However, while the author conducted both types of lectures, it became evident that there was a much stronger reaction from the trainees for the recital-and-interpretation lectures. As the proportion of recital-and-interpretation lectures increased, the scope of the lectures was expanded to include various categories of music genres, performance styles, and instrument. This variety reflected different preferences of trainees by positions and occupations on the kind of music being performed.

In categorizing the genres of music-based program, there was an inclination of trainees' preference for classical music in general, and for instrumental music in particular. Albeit minimal, vocal music was introduced through operas and musicals. The lectures on Korean classical music in 2004 and world music in 2005 received low trainee satisfaction scores, and therefore, were no longer offered.

Employees' position level tended to positively correlate with their age. There was a vast difference in musical genre and composition preferences based on employees' position levels. Newly promoted directors preferred lectures on operas as they tended to go to operas with other VIPs in business. Newly promoted assistant directors in their mid 40s preferred string instruments. This is also the group that showed the most interest in music history and theory. Newly promoted managers, who are usually in their 30s, are the youngest in management. They preferred brass wind instruments and showed excitement for such genres as the tango. It is necessary, therefore, to customize on genre and composition for trainees with different position levels.

A point to be noted in the music-based program at Samsung Group is that more effective education was achieved by presenting live performances during the introduction of classical music. Recital-and-interpretation lectures were effective not only in stimulating trainees' emotional intelligence but also in delivering to trainees musical theory that incorporates harmony, melody, rhythm, and context.

In addition, during the recital-and-interpretation lectures, it was possible to help managers expand their horizons through enhanced content related to music, such as art, dance, literature, and other artistic genres. Furthermore, it was effective to link artists' activities and works to the words that were frequently used by managers, such as "communication," "harmony," and "creation."

6. Limitations of this study and recommendations for future research

This article reported a case study on music-based program at Samsung Group's Human Resources Development Center from 2004 to 2010. The nature of the case study led me develop a set of original hypotheses rather than proving hypotheses.

I designed and taught Samsung's music-based program for the entire 7 years, but did not participate in the assessment of its educational effects. Therefore, I could not categorically analyze the intended impact of the music-based program upon trainees' capability in listening, feeling, and understanding.

Nonetheless, this article has depicted growing demand of corporate educators for emotional intelligence education.

It also revealed Samsung Group's current state of emotional intelligence education Samsung Group is one of Fortune's global 15 companies, but little is known about its employee education and development programs.

The following issues need to examine more carefully:

1. How can we measure the impact of music-based programs?
2. What aspects of the 3 phases of music appreciation (listening, feeling, and understanding) link 4 the elements of music (rhythm, melody, harmony, and context) and the 5 components of trainees' emotional intelligence (self-awareness, self-regulation, internal motivation, empathy, social skills)? How can we design the music-based program so that it improves, individually and as a whole, the five components of emotional intelligence necessary for managers as leaders?
3. If the scope of music-based program is expanded into artistic-cultural education, what areas of managerial capabilities would be stimulated and improved?
4. How can we incorporate artistic-cultural program in designing an executive education program for leadership?

Currently, I am planning studies that address the following two hypotheses.

1. The 3 phases of music appreciation in the music-based program improve the 5 components of emotional intelligence. Specifically, listening provides the ability to understand oneself. Feeling provides self-regulation and internal motivation, and understanding provides the ability to create rapport and build interpersonal skills.
2. The 5 components of emotional intelligence in managers could improve managers' leadership capability, ultimately resulting in the improved operational achievement of the organization.

By verifying the above two hypotheses, I wish to establish theories related with music-based executive education which link music and business administration.

INTE 2014

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A case study on constructivist learning environment in content knowledge courses in science teaching

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Abstract

The present study aims to find out the situations reflecting a constructivist learning environment by analysing the teaching-learning process in the content knowledge courses in Second Grade of Science Teaching Department in Education Faculty, Pamukkale University. It is believed that the results of the study will contribute to the improvement of teacher training programs as it reveals to what extent the learning environments provided to pre-service teachers have constructivist qualities and to what extent these teachers are trained within a constructivist approach. In the study, besides employing a qualitative research method namely case study, the research design "Single Case with Embedded Units" was used. In order to maintain the reliability and validity of the study, data and methodological triangulation were performed. The research study took place in 2011-2012 fall term, in Pamukkale University Education Faculty Science Teaching Department. The classes observed, instructors and students that are interviewed constituted the data sources of the study. As for the data collection instruments, "semi-structured in-class observation form", "individual interview form for instructors and "focus group discussion form for students" were used. The data obtained from observation and interviews were combined together to create a data set. By means of content analysis, codes and themes were identified. As a result of the study, it was found that a learning environment that includes "active learning", "reflective learning", "associating with life" and "assessing simultaneously with teaching " were created in teaching-learning process in content knowledge courses.

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Peer-review under responsibility of the Sakarya University.

Keywords: creative writing; writing disposition; English course attitude; writing success.

Introduction

Teaching-learning approaches and theories explain in what kind of environment and in what way education takes place, also the qualities and the roles a teacher should have. That's why, the effect of these approaches and theories on teacher training programs is undeniable. While individual based learning is replacing the concept of knowledge-based teaching-learning, in terms of the notion of teacher training, a variety of different approaches have emerged namely "behaviouristic approach" supporting the idea that learning occurs via knowledge transfer; "field expert" approach supporting the efficiency of knowing subject matter; "experience/practice-based approach" supporting that teacher should gain more and more experience in order for learning to come true, "constructivist

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approach" totally centralising the learner while giving the teacher a guidance role (YalazAtay, 2003; Gökçe and Demirhan, 2005; Ekiz, 2006; Oğuz, 2009; Yıldırım, 2011)

Primary teaching programs based on constructivist approach have started to be implemented in Turkey since 2005-2006 academic year. It can be suggested that the situation required a need to train teachers that will have the qualities to employ these constructivist approach based programs. Teaching programs applied in Turkey focus on an active learning based on constructivist learning theory whose main consideration is how students learn rather than what students should know and where the learner is placed in the centre of learning by a guiding, leading, facilitating, organizing and motivating teacher.

Teachers constitute the most crucial factor in order for the program to meet these objectives (Ekinci and Öter, 2010). However, since, in Turkey, in 2005, curriculums based on constructivist approach started to be implemented straight forwardly, teachers who were not educated according to the constructivist approach and did not have enough knowledge about the theory encountered a number of difficulties. About this new concept Turkey, having the idea that we can prepare teachers by transferring knowledge based on the old paradigms poses another part of the problem.

No matter how much information we give to teachers pre-service and in-service, unless they are trained and modelled within an approach that supports learning by participating, doing and practicing, it is inevitable that after a while young teacher candidates and teachers will switch back to their old habits of the system in which they were taught. Therefore, creating a proper understanding requires more than presenting the approach in a few lessons (Fosnot, 2007).

When research studies conducted in Turkey about the learning environment of Education Faculties are analysed, it is understood that some of professional teaching knowledge courses have been evaluated in terms of constructivist learning environment; student interviews have been referred to about which qualities of constructivist approach these environments have and which qualities they need to have; and also experimental studies on the efficiency of constructivist curriculum have been carried out. In a study called "Evaluation of the effectiveness of a constructivist teacher education program applications" carried out by Bay (2008), it was found that constructivist program applications are more effective in the attitudes of students towards constructivist approach and success. Ekici (2009), in his study "Science Teaching Tendency of Pre-service Teachers of Science and Technology Course", states that when interview and experimental findings of pre-service teachers are compared, it is seen that they haven't fully embraced constructivism. According to another study called "The Evaluation of Relevancy of Applications In Teacher Training Programs with Constructivist Approach through Pre-Service Teachers' Opinions" by Oğuz (2009), there is some effort to employ learning-teaching process within an constructivist framework, however, it is suggested that this is not in a sufficient level. In this regard, in teacher training programs, revealing to what extent learning environments provided to students have the characteristics of constructivism and to what extent pre-service teachers are trained in this approach and the evaluation of learning-teaching process in terms of constructivist approach can make a contribution to train qualified teachers.

.1. Aim of the Study

By studying teaching-learning process in second grade theoretical and practical content knowledge courses in Science Education Department, the study aims to find out the situations reflecting constructivist leaning environment.

2. Method

2.1 Research Design

In the study, as well as using a qualitative research method namely case study, among the case study designs "Single Case with Embedded Units" suggested by Yin (2003) was employed. This research design is preferred when Single case includes more than one sub units to analyse (YıldırımveSimsek, 2008). In the study, constructivist learning environment in content knowledge courses is considered as the single case. Sub units to analyse in this case consist of content knowledge courses specifically General Biology- I, General Biology Lab-I, General Physics- I, General Physics-III, General Physics Lab- III and General Chemistry- III. So as to maintain the reliability and the validity, data and methodological triangulation were performed. For method variation, "observation" and "interview" were carried out. In order to maintain variety in data, (data triangulation) "observed lessons" and "interviewed instructors and students" have been used as separate data sources.

2.2 Data Sources

This research was conducted in the fall term of 2011 -2012 academic year at Pamukkale University. Pamukkale University Faculty of Education, Department of Primary Education Science Teaching Department was chosen as the study field. That the research was based on long time observations and the researcher was a graduate of Science Teaching Department of the same university had influence on choosing the Science Teaching as the study field. The courses that have been observed, the instructors and the students that have been interviewed compose the research's data sources. The observations continued in content knowledge courses in four different classes for the progress of learning&teaching to be examined thoroughly till the end of the semester. With the purpose of containing the consistency of the research, during the observations in the class atmosphere, apart from the instructor, a program development specialist took part as a second observer. Before participating in the process of the observation, the program development specialist had been informed about the constructivist learning environment and the observation dimensions. Also the program development specialist took observation notes during the observation. This situation was thought to contribute to the consistency of the research. Individual interviews with the instructors who were responsible for the courses to be observed and focus group discussion with the students who took these courses were carried out. Maximum variation sampling method was used for choosing the students to have focus group discussion. The purpose of maximum variation sampling is to try to find out whether or not there are any common or shared facts between the varied cases, and to present the different dimensions of the problem considering this variation (Yıldırım and Şimşek, 2008, 108). Therefore, with the purpose of getting a maximum variation in the research, five students in total were chosen with the condition that one voluntary student would be taken from each of the four different sophomore classes which were responsible for the content knowledge courses included in the research scope and one would be taken from each classes for the focus group discussion.

2.3. Data Collection Tools

As the data collection tool in this research, "semi-structured in-class observation form", "individual interview form for instructors" and "focus group discussion form for students" were used. As the "semi-structured in-class observation form" to be used in collecting data was improved, pilot observations were performed not only to decide on the dimensions to be observed but also to let the researcher gather experience for carrying out purpose-oriented observations. The last shape of the observation form was given by taking the literature and specialist views into consideration. Instructor and student observation forms were improved with the aim of supporting the data acquired from the observations as well as explaining the research question deeply. Open-ended questions and probes that take place in both instructor and student observation forms were determined based on the literature and considering the dimensions on the observation forms, and were arranged in accordance with specialist views. The draft interview form was tested in consultation with an instructor and three students. Necessary corrections were required in terms of intelligibility. Therefore, how the original interview form that would be used at the end of the application would be was decided. Focus group discussion was carried out considering it would be essential to enable the students to interact with each other and to act courageously during the interview.

2.4. Data Collection

In the study, in order to determine how the learning-teaching process in content knowledge courses (General Biology-I, General Biology Lab-I, General Physics-III, General Physics Lab-III and General Chemistry-III) found in the sophomore degree program of Pamukkale University Science Teaching Department in the fall term of 2011-2012 academic year works, participant observation technique was employed. Content knowledge courses were observed for totally 54 hours in all of the sophomore classes during the term by the researcher and a program development specialist and field notes regarding the learning environments were taken. At the end of the term, focus group discussion with the students and interviews with the instructors were carried out.

2.5. Data Analysis

Content analysis method was used for the analysis of the data obtained within the context of research. Similar descriptions regarding the observation dimensions and which were involved in the observation notes of the researcher and program development specialist were determined and integrated and data set was formed relating to observations. In order to resolve ethical issues, the instructors interviewed were coded as "ÖE1, ÖE2, ÖE3, ÖE4 and ÖE5" and the students with whom focus group discussion was made were coded as "ÖA1, ÖA2, ÖA3, ÖA4, ÖA5". In addition, with the purpose of making the data obtained while the observation and interview data were reported represent the content knowledge courses, the initials of the courses "ÖE1-F, ÖE3-K, ÖE5-BL, ÖA2-FL, ÖA4-B etc." were added to the coding. Finally, similar descriptions regarding the observation dimensions and which were involved in the observation notes of the researcher and program development specialist were determined and integrated and data set formed relating to observations was transferred to

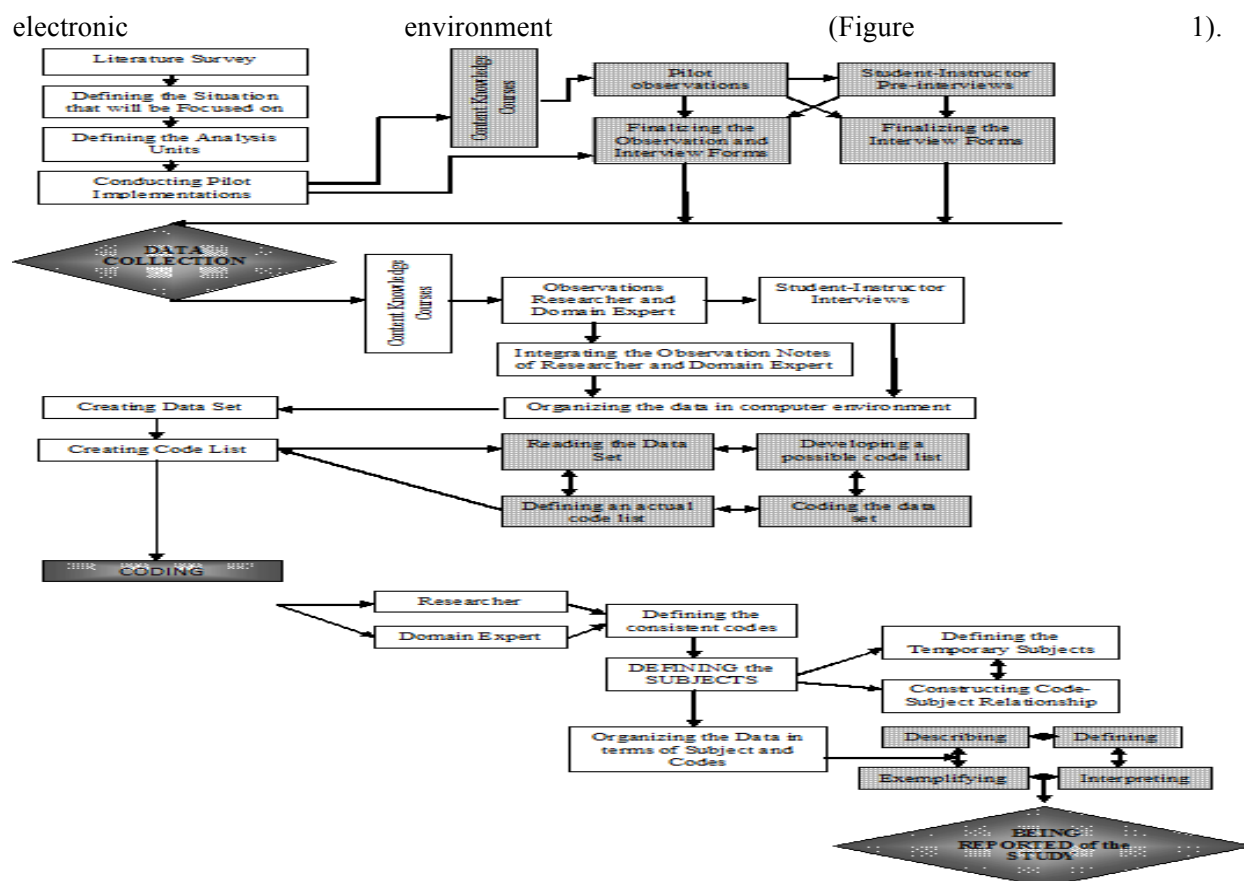


Figure 1. Data Analysis Process

3. Results

The codes and themes given in Table 1 were attained as a result of the content analysis of the data obtained from observations and interviews.

Table 1. Codes and Themes Attained as a result of Content Analysis

Themes	Codes
Active learning environment	giving opportunity for attendance to lesson
	the value given to the ideas of the students
	freedom to choose a subject
	making their own learning decisions
	providing opportunity for ideas to be shared
Reflective learning environment	group work
	providing student-student interaction
	feeling the need to research
	causing one to think
	questioning the ideas
	producing new ideas/ways

	a change in ideas
	noticing the existence of more than one truth
Associating with life	noticing the applicability transfer to professional life
Assessment Simultaneous with Teaching	Obtaining content validity course assessments having diary kept having portfolio prepared V-model diagram

As shown in Table 1, the codes attained as a result of the content analysis of the data obtained from observations and interviews were grouped under four themes which are “active learning environment”, “reflective learning environment”, “associating with life” and “assessment simultaneous with teaching”. Quotes from different data sources about this theme are chosen considering the criteria of fitness for purpose, significance, support of different data sources, perception against the explanations in other data sources, frequency in different data sources and presented below.

3.1. Active Learning Environment

As a result of the analysis of the data obtained from the interviews and observations, the codes of “giving opportunity for attendance to lesson”, “the value given to the ideas of the students”, “freedom to choose a subject”, “making their own learning decisions”, “providing opportunity for ideas to be shared”, “group work”, “providing student-student interaction” were attained in relation to the constructivist learning environment and on the basis of these codes, “active learning environment” theme was identified. Quotes from different data sources about this theme are presented below.

“... the instructor asks the students and the students ask the instructor. The questions that the student giving presentation couldn’t answer are directed to the class. Why-how?... The questions (related to the topic and general) are examined during the class. The instructor provides opportunity for the content of the questions and the answers to be discussed. Although the instructor makes the majority of the explanations, he encourages students to declare their ideas about the topic beforehand. The instructor acts as a collector of these ideas.” (Observation Field Note: F)

“... in the physics lab, we find and analyze the experiments ourselves, so it contributes to our research skills... It both gives us experience, so we know how to do it ourselves and also we tell the class ourselves..., the instructor does not. Indeed, the information that you have obtained yourself is always more permanent. Because it is more effective if the students search with their own means and learn themselves. (Interview Record: ÖA1-FL)

“So a feature of biology is that controversial topics like evolution are really open to express an opinion and thought and make comment. But as I said; if it is a stereotype, then there is nothing to be said about it. For instance, the subject is systematic; this is a flowering plant and this is not; that’s it. It has a literature and we follow it as well. There is nothing in this to be commented. You may ask questions at the most; and that’s it. For example, I cannot discuss a cell with 30 people, it’s ridiculous. A cell is a cell. There are organelles in it. They unite and form textures. In any case, for a student-centred education, I will prefer laboratory for biology. (Interview Record: ÖE5-B)

“... we recommend books to the students at the beginning of the term. We recommend them the first books saying that we'll use books. The students buy the book or not; it's not compulsory. However, our weekly schedule is clear as well.” (Interview Record: ÖE1-F)

As a result of the analysis of the data, it was seen that both the instructors and the students expressed that more opportunity for active learning environment was provided to the students especially in applied courses compared to theoretical courses among content knowledge courses and the data obtained from the observations supported this finding. It can be stated that applied courses are by nature more suitable for active learning environment than theoretical courses, but in theoretical courses in order to activate the student, more effort from the instructor and his skills are needed.

3.2. Reflective Learning Environment

The codes of “feeling the need to research”, “causing one to think”, “questioning the ideas”, “producing new ideas/ways”, “a change in ideas”, and “noticing the existence of more than one truth” and attained as a result of the analysis of the data obtained from the observations and interviews were combined under the theme: “reflective learning environment”. Quotes from different data sources about this theme are presented below.

“... our sense of wonder and interest further increased; at least when I look around, I feel that my power of questioning increased.” (Interview Record- ÖA4-B)

“... now I question everything in order to understand why it happened so... I learnt things I hadn't known before and associated them. For instance, our first experiment was to know the microscope; I explained the lenses in microscopes with the theory of optics. The instructor liked it, because I not only learnt the working mechanism of the microscope but also introduced it to my friends. That is, I took advantage of both chemistry and physics and saw that they cooperate and all of them benefit from each other. Now, in what area does it have effect in biology as a whole? Could there be an answer of the question? Can I find any theories there? In which field did they produce information? Can we associate with it? We are thinking about it.” (Interview Record-ÖA4-BL)

“... They record their learning during the class. After the class, there is a part called scientific claims and in this part I want new information that is the relationships they made sense of. Or I ask them to save their learning logs...” (Interview Record: ÖE4-BL)

The instructor drew attention to the relationships between concepts. She asked contradictory questions, gave examples, directed learners to think. She tried to make the students giving presentation explain the sentences one by one with their own sentences rather than only read what is written in the slides and asked for examples. When she couldn't get any answers from the students, she tried to help the students by asking new questions... “Thermo means heat; does a thermometer measure the temperature? A contradiction.” She aroused curiosity by saying “We'll come to that soon”... Original ideas were asked for such as “Which criteria do you think were taken into consideration and were changed when a variety of thermometers emerged? “If you made a thermometer, what kind of thermometer would you make?” The students asked questions to the instructor, as well. “In either case, different results ensued, what do you think is the reason for this? What liquids would you use? What materials would you use to make a thermometer?” They also asked the reasons for the responses given... “What kind of effect could density have?” They

compared the positive and negative aspects. Contradictions were too many... Ideas were presented, answers were given, brainstorming was carried out... “What should be the characteristics of a thermometer? Why? (Observation Field Note: F)

“... If I were a teacher, I would do as our biology teacher does rather than read the slides; I think this is the most effective way of learning. Because everybody does research individually, learns something and presents what they have learnt to the class and another student learns the thing that the other student hasn't learnt; so there occurs a sharing environment.” (Interview Record: ÖA1-B)

“There are various opinions, they are tested; some are found sensible, some not. I believe this is useful.” (Interview Record: ÖE2-FL)

When the data were analyzed, it was found that the learning environment in both the applied and theoretical courses served to reveal the students' reflective thinking by means of questioning, helping them generate ideas, encouraging them to keep diary and to do research. The learning environment provided in content knowledge courses may be stated to be a characteristic of constructivist learning environment.

3.3. Associating with Life

The codes of “noticing the applicability” and “transfer to professional life” attained as a result of the analysis of the data obtained from observations and interviews, were combined under the theme “associating with life”. Quotes from different data sources about this theme are presented below

“We write reports on our experiments we did the previous week. The instructor asks questions about that report, but they are not based on knowledge, they go beyond knowledge. That is, she says “tell me what you understood, what you found; don't bring me direct information; bring different things” and she constantly asks us to associate with daily life or other living things or other things.” (Interview Record: ÖA2-BL)

“But daily life is very important for us, exemplifications are useful... Once, I associated a value obtained from gravimetric analysis with a water bottle from daily life and gave the example that it was among the information found on the bottles. It considerably aroused their interest.” (Interview Record: ÖE3-K)

“I like teacher's teaching method in physics class, because he relates things with real life very successfully and it got permanent in my mind and as he related things with real life, I comprehended physics better... they claim university is all about theoretical knowledge, but we should be able to relate it with real life a little bit, because we should learn first, so we can teach in the future.” (Interview Record: ÖA4-F)

“He gave examples from daily life such as the nearest point human eye can see, the best visible light, the fact that our eyes should be improved 2500 times more in order to see an atom... The instructor compared how a person dealing with diamond sees with glasses and how an atom looks through a microscope by making associations with real life... He related with real life by giving the example of the pressure of car tires and made the subject concrete... “He gave equivalents from real life in order to explain the importance and smallness of the minimal values, tried to make them

see from different angles by making comparisons. He made his comparison by stating the population of the world is 7 billion and the number of particles in a mole is 1026" and it was highly remarkable." (Observation Field Note: F)

The instructor asked questions to the students about what they would do when they became teacher, she made suggestions, and gave advices; "What's told and the experiments may sometimes not match." "Not everything needs to keep balance, let it be short but to the point." There has to be no misconception, and to be prepared beforehand is needed... She told the students that they needed to take action through experience in their careers. She gave tactics to them; "You should stall the students until the experiment is implemented!" The experiment was done. She gave examples by saying that 'If there was no equipment, more different apparatus could be prepared by using creativity.' She showed that it could be achieved in spite of the impossibilities." (Observation Field Mark: BL)

"Well, the other day, in class, I told the students that whether you would be sick or not in 10 or 20 years' time became clear with DNA pairs nowadays. They said: 'Wow, how nice!' I said it wasn't so nice in my opinion. Why so? At first, nobody agreed with that. The point we reached by arguing is that, let's say, I'm a health insurance company; I don't provide insurance for you just in case there will be a risk of you getting cancer ten years later. Or I'm a big company, I don't recruit you. You will die because of cancer 10 years later, but you are a person with high capacity, maybe you will not get cancer, only the probability of it coming true is kind of shown. Different viewpoints, of course, come out. (Interview Record: OE5-BL)

When the data are examined, it is indicated that abstract knowledge for students are embodied with examples from real life in courses, that where they will be able to use the knowledge they gain is questioned, that awareness about the situations they may face in their careers is created. It can be said that associating both theoretical and applied science courses with real life, by its very nature, is an expected case.

3.4. An Assessment Simultaneous with Teaching

The codes of "Obtaining content validity", "course assessments", "having diary kept", "having portfolio prepared" and "V-model diagram" attained as a result of analysing the data acquired from observations and interviews are combined in the theme of "an assessment simultaneous with teaching". Quotes from different data sources about this theme are presented below.

"The instructor made a statement about the diaries that students had to keep, had a student read the sample daily questions and answers. She stated that they had to associate what they had learnt with daily life and that they had to write them down to their diaries. As an example, She had the students who wrote as he expected read what they had written. She directed the students to research. She waited for them to comment. She had some examples, too, from those who wrote wrong or incomplete read. He asked the differences to other students and made the students compare them. Finally, he got opinions from the students about whether the type of the final test would be classical or test, and the classical was opted for." (Observation Field Mark: BL)

"...and there's something like that; our exam questions will be with regard to the experiments that we've done... Everyone is responsible for himself or herself in the exam, but it may be like this; if

everyone was responsible for each one's experiment, maybe then learning would occur..but the teacher said: "I'll give everyone a paper, and all of you, according to your experimental group, in other words two people, will write the experiment that you have done that day." For example, while they (other sections) are responsible for all of the experiments, everyone among us is only responsible for her/his own experiment. There is this thing; it's a sure thing that we will answer 7 questions as there will be 10 questions. 70 is certain. he will ask 3 different questions and they will be most probably from that book we've bought. Because he said that he would ask theory about thermodynamics. He will ask knowledge after all. If you know, you will answer; if not, you won't answer..." (Interview Record: OA4-FL)

"We didn't have a physics test. What we did was that everyone was responsible for her/his own subject he gave a lecture on before." (Interview Record: OA1-F)

"... we have an active role mostly in biology. While we're kind of preparing a V-model diagram in biology, it has the part of theory and of experiment, and we write anything we've learnt behind it. When we do this, we somehow learn albeit with some difficulty... We're obliged to because we search. For instance, at first, I was drawing a diagram in 7 hours, and I myself was the one to have difficulty most. But I gained, not only the knowledge, how it works also with those plants in daily life as we said before. I mean I know all of them." (Interview Record: OA2)

"The Instructor checked on those who have been doing experiment, told them if it progressed right or not, and what they must do. And he sometimes asked the why and how of their works. He had the students done their experiments again after changing their materials in circumstances that led to unexpected results. He directly told them what they must do, and asked them to write down what they have found out without getting any ideas from them and without waiting for them to offer a solution... The instructor gave directly the correct answer to the students' questions. (How do we find out the volume of the stone? It's simple; the rising amount is the volume as long as it doesn't overflow.) (Observation Field Mark: FL)

"The instructor is ranging through students and checking one by one what they have done, and is guiding them. She is sometimes giving expressions to the whole class. The students are occasionally asking for the instructor's help... She is giving reinforcements to the ones who has found any shapes; "great, very nice, now it's done..." There is an exchange of materials between groups, those who couldn't find an image are looking at the others who found one, and they are helping them prepare the material. The students are quite comfortable. The instructor is leading the other groups to the one that captures a good image, and states that She expects the same image from them, too. The instructor responds to every effort of the students on the subject. The students are constantly asking questions about the activity they do, but mostly they called the instructor as they want her to check it. And the instructor, by commenting on what's done, deals with the process of the students' activity. A group captured a good image related to the subject on the microscope. The instructor directed the class to share this image with the others. (Observation Field Mark: BL)

When the interview and observation data were examined, it was determined that while assessment in theoretical courses are more in the form of ask&answer, lecturing and in-class assessment; in applied courses, the scientific process skills students have are assessed through experiments, and an assessment simultaneous with teaching is carried with the methods of assessment like V-model diagram and "keeping a diary". It may be asserted that using assessment methods like these is the sign of a factual assessment simultaneous with teaching, and this case is suitable for the features of constructivist learning environment.

4. Discussion and Conclusion

Considering the findings acquired in the research, the conclusion of that the learning environment which includes the properties of "active learning", "reflective learning", "associating with life" and "assessment simultaneous with teaching" occurs is achieved, through the process of learning&teaching of Content Knowledge Courses at Pamukkale University, Science Teaching in sophomore year. This result was compared to the search results which were done to specify the properties that need to be in the environment of constructivist learning. In their work titled as "Monitoring constructivist classroom learning environments", Taylor, Fraser and Fisher (1997) take the qualities of constructivist learning environments as personal interest, scientific uncertainty, shared control, critical voice and student agreement. Also, Tenenbaum, Naidu, Jegede and Austin (2001), in their work, deal with arguments and interviews, conceptual contrasts, sharing opinions with others, solution-oriented materials and sources, motivation for reflection and research for concept, meeting the needs of learner, interpretation and real life examples as the qualities of constructivist learning environments. In Bay, Kaya and Gündoğdu's (2010) research, based on the constructivist approach, learning environments supporting democratic values such as the ones that promote learners' autonomy, appreciation, justice, respect for different ideas, accepting the differences, mutual understanding, cooperative work, responsibility and critical thinking are established. In this regard, it can be said that certain parts of qualities that need to be present in constructivist learning environment are present at the process of learning&teaching in the content knowledge courses which have been examined in the research but that the qualities of "personal interest", "solution-oriented materials and sources", "meeting the needs of learner" are not.

When Content Knowledge Courses in Science Teaching in sophomore year are compared as theoretical and applied courses, the result of that the process of theoretical courses, compared to applied ones, reflects the qualities of constructivist learning environment less in terms of providing an environment for "active learning" and "assessment simultaneous with teaching" is achieved.

5. Suggestions

According to the search results, it appears that the process of learning&teaching in content knowledge courses includes some parts of the qualities of constructivist learning environment. However, it must be designed again in the manner of reflecting the qualities, too, of constructivist learning environment which doesn't include the process of learning&teaching in content knowledge courses.

Thinking that constructivist learning approach is not restricted with the learning environments in which active participation of students are provided, at the same time, it's the environment in which how to construct the knowledge also is gained, the qualities of constructivist learning environment should take place in theoretical courses beside applied ones.

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A case study on preservice science teachers' laboratory usage self efficacy and scientific process skills

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Abstract

Laboratory usage self efficacy and scientific process skills are effective variables for science teachers' professional careers. Therefore, teacher education systems need to have activities to promote preservice teachers' development of affective and cognitive skills like laboratory usage self efficacy perceptions and scientific process skills. The aim of the study is to investigate the preservice science teachers' laboratory usage self efficacy perceptions and scientific process skills and to figure out if there is any relationship between these two variables. The study was conducted in 2010-2011 academical year, at a state university's education faculty. 66 preservice science teachers were enrolled in this study. Laboratory Self Efficacy Scale and Scientific Process Skills Test were applied to preservice teachers. For data analyze SPSS 21.00 programme was used. Independent sample t test and Pearson Product-Moment Correlation Coefficient method were used to analyze the data. There were statistically significant relationships found between all sub dimensions of laboratory usage self efficacy scale. Significant relationships also were found between all sub dimensions of scientific process skills test. However any significant relationship wasn't found between these two data collection tools. Neither laboratory usage self efficacy scale nor scientific process skills test results didn't show any significant difference according to gender variable.

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Peer-review under responsibility of the Sakarya University.

Keywords: Preservice science teachers; laboratory usage self efficacy; scientific process skills; teacher education.

Introduction

One of the biggest problems of Turkish Education System is ineffective science education (Eş and Sarıkaya, 2010). Countries give especially importance to science education to not to be backward on scientific and

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technological developments and provide continuing progress. Therefore, some initiatives have been done since the last century to promote the quality of science education. Most of this enterprises are for to improve new education programmes according to new variations (Ayas, 1995).

Teachers are the core dynamic factors to clarify the education quality. The roles of teachers in education system are so important that whenever a reform in the past was made without given care to teachers' existing knowledge, perceptions, beliefs and dispositions; the results of the reform were mostly unsuccessful (Van Driel, Beijaard and Verloop, 2001). To train qualified teachers who perform their roles in education system correctly and to give them a place in professional life, are the serious responsibilities for moving the education system to success (Özoğlu, 2010).

The practitioners of science education in schools are science teachers, so teachers need to be taught with contemporary knowledge, abilities and attitudes. Also they should learn new learning and teaching approaches in science education (Özmen, 2004) and continuous information updates which are required (Pinto, 2002). This approaches help teachers' self meaningful learning and help them to teach their students with actual education knowledge. By this way, teachers can develop their problem solving abilities and can teach their students with daily life related. If teachers learn more about how to face with a problem, they can show the same way to their students.

For learning the scientific method to solve problems; education environments mostly need to laboratories. Laboratory education and experimental works which can be performed by students, are going to help them to reach higher cognitive levels (Hart, Mulhall, Berry, Loughran and Gunstone, 2000; Al-Naqbi and Tairab, 2005). All science courses which have laboratory; teach students to investigate, to ask, to find the problem and to work collaborative with peers for solving it. The laboratory works help self development on observation, inquiry,

using scientific method and scientific research (Chiapetta, 2007). The important point of this development is the teacher who has high self efficacy perceptions about laboratory. According to Bandura (1997), self-efficacy is an effective attribute in the formation of behavior and is defined as self-judgments of individuals' capacity about to organize and complete a certain activity successfully.

In science education, laboratory self efficacy perceptions are in relationship with science activities, scientific process skills and beliefs about laboratory usage. Teachers with high self efficacy perceptions are in trend to use student centered learning approaches, pay more attention to them and devote more time for application in the courses and they are really successful to perform them (Harurluoğlu and Kaya, 2009; Altunçekiç, Yaman and Koray, 2005). Teachers should gain scientific process skills to dominate their professional career with high self efficacy perceptions. Scientific process skills are the basic skills that facilitate learning in science, allow students to be active, develop a sense of taking responsibility for their own learning and help students to gain the research ways and skills (Çepni, Ayas, Johnson, and Turgut, 1997). Zoldosova and Matejovicova (2010) identify scientific process skills as the scientific way which guides researcher for thinking.

Learning in laboratory can be provided by scientific argumentation and interaction between social issues and cognitive abilities (Hofstein and Lunatta, 2003). Laboratory method has the aim that activities need to be performed by students for meaningful learning with active learning. At the same time it is known that this method has positive effects on development of critical thinking, scientific view and problem solving abilities (Serin, 2002). Altunçekiç, Yaman and Koray (2005), emphasise that in teacher education, importance should be given to the development of self efficacy perceptions and studies on determining the preservice teachers' both self efficacy belief levels and problem solving abilities should be done. In the literature it can be seen that these variables were under debated separately, but it couldn't be reached to any study that investigated both self efficacy and scientific process skills at the same time. Sinan and Uşak (2011) were investigated biology teacher candidates' scientific process skills and found that in biochemistry laboratory course they were in good condition in terms of skills. Also this skills were in positive relationship with course passing grades. In Altunçekiç, Yaman ve Koray (2005)' s study, they investigated preservice science and mathematics teachers' problem solving skill levels and figured out that preservice teachers' self efficacy beliefs and problem solving skills show differences according to various variables. Akbaş and Çelikkaleli (2006) determined self efficacy perceptions about science teaching didn't differ according to gender variable but there were differences according to university training.

The aim of this study is to investigate the preservice science teachers' laboratory usage self efficacy perceptions and scientific process skills and to figure out if there is any relationship between these two variables. The sub problems of the study are;

1. Is there any significant difference between Laboratory Self Efficacy Scale scores according to gender?
2. Is there any significant difference between Scientific Process Skills Test scores according to gender?
3. Are Laboratory Self Efficacy Scale sub dimension scores related to total scale score?
4. Are Scientific Process Skills Test sub dimension scores related to total test score?
5. Are there any relationship between Laboratory Self Efficacy Scale and Scientific Process Skills Test Scores?

Method

This was a quantitative research and descriptive research method was carried out as a part of scanning models. Scanning models is a convenient model for the research which aims to make a description for the cases belongs to past or are still occouring (Karasar, 2006).

.1. Study group

The study conducted in 2010-2011 academical year, at a state university's education faculty. 66 preservice science teachers were enrolled in this study. 57 of them were girls and 9 of them were boys.

.2. Data Collection Tools

.2.1. Laboratory Self Efficacy Scale

Laboratory Self Efficacy Scale (LSES) was developed by Ekici (2009), for determine biology teachers' self efficacy perceptions and to investigate biology teachers' laboratory self efficacy perceptions in terms of personal characteristics. 5 point Likert -type scale was developed from two sub dimensions; Personal Factors and External Factors (Factors Related to Student and media). In the first sub dimension 8 items (6, 10, 2, 15, 7, 12, 14, 5), in the second sub dimension 10 items (3, 9, 16, 11, 13, 17, 1, 18, 8, 4) were located . The overall Cronbach's alpha reliability coefficient of the scale was found to be 0.90 . Positive sentences coded as " Strongly Agree = 5 points ", "Agree = 4 points ", "Undecided = 3 points ", " Disagree = 2 points" and " Strongly Disagree = 1 point ", the negative sentences coded opposite way (Ekici, 2009). For this study, the alpha value of the scale was found as 0.842.

2.2.2. Scientific Process Skills Test

Scientific Process Skills Test (SPST) was developed by Okey, Wise and Burns (1982) and Turkish adaptation was made by Geban, Aşkar and Özkan (1992). Test consists of 36 multiple choice questions and these questions are 5 type skill questions. The skill types and the belonging questions are: Defining variables (1,3,13,14,15,18,19,20,30,31,32,36), making operational descriptions (pragmatically define) (2,7,22,23,26,33), hypotheses formation and defining (4,6,8,12,16,17,27,29,35), graphics and data interpretation (5,9,11,25,28,34) and research design (10, 21, 24). After Turkish adaptation study, Cronbach's alpha reliability coefficient was found to be 0.81 (Geban, Aşkar ve Özkan,1992). Preservice teachers' correct answers were coded as "1" wrong answers were coded as "0". For this study, the alpha value of the test was found as 0.856 .

3. Data Analyze

For data analyze SPSS 21.00 programme was used. Independent sample t test and Pearson Product-Moment Correlation Coefficient Method.were used to analyze the data.

Findings

Table 1: Independent sample t-test results whether Laboratory Self-Efficacy Scale Scores differed by gender

Scale	Groups	N	X	s.s.	SH _x	t test		
						s.d.	t	P
LSES	Girls	57	67,7544	9,00254	1,19242	64	-1,195	,237
	Boys	9	71,5556	7,87577	2,62526			

As seen from Table 1, there was not found any statistical difference between girls and boys according to their Laboratory Self Efficacy Scale Scores ($t_{64} = -1,195$, $p > .05$). Also there weren't any significant differences seen between Personal Factors and External Factors sub dimension scores according to gender variable.

Table 2: Independent sample t-test results whether Scientific Process Skills Test Scores differed by gender

Scale	Groups	N	X	s.s.	SH _x	t test		
						s.d.	t	P
SPST	Girls	57	22,6842	6,61480	,87615	64	-1,129	263
	Boys	9	25,2222	2,77389	,92463			

As seen from Table 2, there was not found any statistical difference between girls and boys according to their Scientific Process Skills Test Scores ($t_{64} = -1,129$, $p > .05$).

Table 3: Independent sample t-test results whether Scientific Process Skills Test sub dimensions Scores differed by gender

Scale	Groups	N	X	s.s.	SH _x	s.d.	t test	P
Defining Variables	Girls	57	6,1404	2,53151	,33531	64	1,157	,252
	Boys	9	5,1111	2,08833	,69611			
Making Operational Descriptions	Girls	57	4,4561	1,28272	,16990	64	-2,498	,015
	Boys	9	5,5556	,72648	,24216			
Research Design	Girls	57	2,3860	,81841	,10840	64	-,996	,323
	Boys	9	2,6667	,50000	,16667			
Hypotheses Formation and Defining	Girls	57	5,7719	1,94585	,25773	64	-2,193	,032
	Boys	9	7,2222	,83333	,27778			
Graphics and Data Interpretation	Girls	57	4,4561	1,28272	,16990	64	-2,498	,015
	Boys	9	5,5556	,72648	,24216			

As seen from Table 3, there were found statistical differences between girls and boys according to their “Making Operational Descriptions” ($t_{64} = -2,498$, $p < .05$) and “Graphics and Data Interpretation” sub dimension scores in favor of boys ($t_{64} = -2,498$, $p < .05$). The other sub dimensions; Defining Variables ($t_{64} = 1,157$, $p > .05$), Research Design ($t_{64} = -,996$, $p > .05$) and Hypotheses Formation and Defining ($t_{64} = -2,193$, $p > .05$) didn’t show any significant difference according to gender variable.

Table 4: Results of the Pearson Product-Moment Correlation Analysis Performed to Determine the Relationship Between Laboratory Self Efficacy Scale Total Scores and Sub dimension Scores

<i>Variables</i>	<i>N</i>	<i>r</i>	<i>P</i>
Personal Factors			
LSES	66	,931	,000
External Factors			
LSES	66	,943	,000

As shown in Table 4, positively significant relationships were detected between pre-service teachers’ Laboratory Self Efficacy Scale total scores and the sub dimension scores of Personal Factors ($r = ,931$; $p < .01$) and External Factors ($r = ,943$; $p < .01$).

Table 5: Results of the Pearson Product-Moment Correlation Analysis Performed to Determine the Relationship Between Scientific Process Skills Test Total Scores and Scores

<i>Variables</i>	<i>N</i>	<i>r</i>	<i>P</i>
Defining Variables			
SPST	66	,782	,000

Making Operational Descriptions			
SPST	66	,783	,000
Research Design			
SPST	66	,833	,000
Hypotheses Formation and Defining			
SPST	66	,789	,000
Graphics and Data Interpretation			
SPST	66	,659	,000

As shown in Table 5, positively significant relationships were found between pre-service teachers' Scientific Process Skills Test total scores and the sub dimension scores of Defining Variables ($r=.782$; $p<.01$), Making Operational Descriptions ($r=.783$; $p<.01$), Research Design ($r=.833$; $p<.01$), Hypotheses Formation and Defining

($r=.789$; $p<.01$) and Graphics and Data Interpretation ($r=.659$; $p<.01$).

Table 6: Results of the Pearson Product-Moment Correlation Analysis Performed to Determine the Relationship Between Laboratory Self Efficacy Scale Total Score and Scientific Process Skills Test Score

<i>Variables</i>	<i>N</i>	<i>r</i>	<i>P</i>
LSES SPST	66	,085	,495

As seen from Table 6, there was not found any statistical relationship between these two data collection tools; Laboratory Self Efficacy Scale and Scientific Process Skills Test ($r=.085$; $p>.01$).

Results and Discussion

As seen from the findings, preservice science teachers' laboratory self efficacy perceptions didn't change according to gender variable. Ekici (2009) found statically significant differences between professional experience levels and laboratory self-efficacy perceptions of teachers. In the study it is figured out that these differences were in favor of female teachers and teachers with less than 10 years experience. Harurluoğlu and Kaya (2009) didn't identify any significant difference between biology teaching profession self efficacy perception scores according to gender in their study which was done with biology teachers. Also Azar (2010) pointed out male and female teacher candidates' teacher self efficacy perceptions didn't change. Different types of self efficacy perception investigations can be reached in the literature and some of them found significant difference according to gender variable (Jones and Wheatley, 1990; Morgil, Seçken, and Yücel, 2004; Britner and Pajares, 2006). While our finding is in contrast with these studies, also it supports the studies in which didn't find any differences (Yaman, Cansüngü, ve Altunçekiç, 2004; Altunçekiç, Yaman ve Koray, 2005). Our study aimed to investigate specially laboratory self efficacy perceptions. Therefore it may be said that gender doesn't effect preservice teachers' laboratory self efficacy perceptions but experience effect according to the year of experience.

Preservice science teachers' scientific process skills also didn't change according to gender. However, "graphics and data interpretation", "hypotheses formation and defining" and "making operational descriptions" sub dimensions showed significant difference in favour of male students. Inquiry and research based learning environments promote scientific process skills more than traditional laboratory courses (Ketpichainarong, Panijpan and Ruenwongsa, 2010). In Bilen ve Aydoğdu (2006)'s study activities which were prepared by "Predict- Observe and Explain" technique, caused an increase in preservice science teachers' scientific process skills and understanding of the nature of science. Therefore it may be said that not only gender but also the learning environment shapes the scientific process skills. Research based science laboratories help students to

create their own problems instead of concept memorization. Students can solve their problems by doing and living, they can think critically and give their own decisions (Rehorek, 2004). In science courses some differences can be derived because of female and men's brain specialities, social and economical backgrounds (Özay, Ocak and Ocak, 2003). The differences between "graphics and data interpretation" and "making operational descriptions" sub dimensions could be the result of these kind of variables and the interest of male students to these areas.

In this study there was no relationship found between preservice science teachers' laboratory self efficacy perceptions and scientific process skills. Watters and Ginns (1995) stated that personal science teaching self efficacy could be improved in situations where individual students were experienced in an appropriate learning environment. Altunçekiç, Yaman and Koray (2005), figured out that when preservice teachers' self efficacy perceptions were developed, skills like scientific problem solving were developed at the same time. Science education has generally involved teaching not only a body of knowledge but also the processes and activities of scientific work (Flick and Bell, 2000). Gorrell and Capron (1988) argued that preservice training programs must attempt to "instill appropriate skills and attitudes" in prospective teachers and especially focus on efficacy beliefs. When knowledge and activities are given at the same learning environment, students can be affected more equipped and more sufficient. In our study preservice science teachers might have a confusion in their thoughts about scientific process skills and these could cause to a concern. Therefore there wasn't any relationship found between these two variables.

Suggestions

In teacher training, self efficacy perceptions enhancing activities should take place. Especially for preservice science teachers, science process skills developing activities can be more integrated to the curriculum. By this way in laboratory areas which are one of the most important environments of science education, teacher candidates can be educated more confident, encouraged for research and with higher self- efficacy perceptions. Working with teachers and with larger samples may lead the researchers who are working in this field.

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INTE 2014

A comparative analysis of accounting education's effectiveness with the balanced scorecard method: A case study of KMU

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Abstract

The goals wanted to achieved after the accounting education process, in other words the efficiency in accounting education is required acting in accordance with the plans, politics and strategies which are constituted in the beginning of the process. Analogously it is so important for achieving the efficiency in accounting education that comparison of the point reached in particular terms with the goals wanted to achieve and the evaluation of outputs reached during the process. Balanced Scorecard (BSC) which is one of the performance measurement tools is a technique used for comparing the goals with the activities and evaluating of outputs. In this context the efficiency of accounting courses at Karamanoğlu Mehmetbey University (KMU), Faculty of Economics and Administrative Sciences, Department of Business Administration. Accounting education divides into four dimensions of the BSC and an questionnaire is applied to the students of department of Business Administration for customer size, internal processes' size, learning and growing dimensions. The data which acquired from the survey applied to the students who take course for four years and which is related to other dimensions of BSC is examined and interpreted.

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Peer-review under responsibility of the Sakarya University.

Keywords: Accounting Education; Balanced Scorecard; Accounting Education Efficiency

Introduction

Efficient accounting education is required for the students who take accounting courses in the universities to meet the expectations of the business world and to be successful in their professional careers. The efficiency is generally defined as the degree of accessing the results from the activities done by the short-term, middle-term and long-term aims. It is required for maintaining the efficiency that developing the detents in which comparing the current situation with objectives and reviewing the process by determining strengths / weaknesses of the process with the effective analysis and reorganizing it as needed.

It can be possible in accounting education that meeting the expectations of the business world and having the successful individuals in their professional careers by using the resources efficiently and making continuous improvements. For evaluating the output is required that determining and examining the factors affect the process and analyzing the process. By the process and the performance measurement tools which is effective in the process and which is used in analyzing, the data regarding the quality, attributes and the level of meeting the expectations can be gained and making regulations.

1. Accounting Education

The accounting education is the activities that teaching the using of paths, methods and techniques followed in the process of the collecting data which is so important for the business and can affect the decisions and monitoring, classifying, reporting and evaluating this data. Beside having the individuals gain these skills along their professional lives, one of the other aim in accounting education is setting the concept of continuous

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learning to the individuals. Whereby the individuals can be sufficient for meeting the expectations through following the current developments and updating their knowledge levels. In parallel to these purposes, the road map which determines the future of the accounting education are drawn in the declaration of the initial state of The Accounting Education Change Commission (AECC). It is declared that teaching how they learn by instructors is required for being professional accountants (AECC, 1990). Through teaching how they learn, it will be taught the way of developing their professional knowledge levels beside training the individuals who have the skill for meeting the business world.

Interactive learning techniques are heavily used in accounting education (Kerr ve Smith, 2003). In the transfer between the students who are in the receiver position and the instructor who is in the transmitter position, the students are in active status, and the instructor is in passive status. It is mostly referred in the workings that implementation of intensive teaching techniques are required about increasing the efficiency in accounting education. In the base of these learning techniques there is the thought of converting the students from the passive status to the active status.

The students is also an important factor in respect of efficiency in accounting education beside instructor factor. The students' learning characteristics, expectations and perceptions of the accounting profession affect the outcomes obtained from accounting education. Analyzing the students and so configuring the teaching techniques are included in the studies concerning the instructor factor for aggregating the quality of the outcomes obtained from the accounting education. For example, Fogarty and Goldwater (2010) find that there is no gender effect which can be considered serious over the students' success in accounting education and the success in accounting education is related mostly with personal characteristics and the effort.

The efficiency in accounting education is under the influence of numerous factors such as instructional techniques, student, physical facilities, course contents, course materials, financial possibilities and so on. All factors efficient in accounting education must be take into consideration at analyzing the efficiency in accounting education. Balanced Scorecard (BSC) method which is one of the methods that include all factors efficient on the process and the performance into the analysis process can be used as a tool for measuring the efficiency in accounting education.

2. Balanced Scorecard

BSC is an innovative performance measurement tool developed by Kaplan and Norton (1992). With versatile, fast and optimal number of performance indicators, BSC provides to the managers the measures that the business can make performance measuring. The occurrence purpose of the BSC is to use in the for-profit businesses. After it there were some studies about BSC can be used in the non-profit organizations like schools, universities (Papenhause and Einstein, 2006; Pinen, 2007; Drtina et al., 2007; Farid, 2008). The private universities which are not belong to the state are used at the BSC works done over universities. The number of works done over state universities is quite small number (Aljardali et al., 2012).

Analyzing financially and reporting provide substantial results for the managers. However, only financial dimension is not sufficient for determining and evaluating holistically the business' performance and the strategic status (Sordo et al., 2012). Beside the data systems provided financial data which can be used in making and evaluating short-term and long-term plans and which can be used in analyzing businesses holistically, there are needed tools which can report non-financial data such as BSC.

BSC provides guiding tools as a tool of measuring the strategies of the business to the managers for gaining competitive advantage at the future. BSC has four dimensions. These are financial, customer, internal processes, learning and growing dimensions (Kaplan ve Norton, 1996: 2). BSC's dimensions are summarized below (Kaplan ve Norton, 1996: 25-28):

- 1) *Financial Dimension*: The results of the business' activities are measured at that dimension. Using the measures which give open and obvious results, the company's profitability, operating income, return on investment and economic value added are put forth by that dimension of BSC. Similarly, the measurements regarding cash flow and sales targets are included in the financial dimension.
- 2) *Customer Dimension*: It is about the customer dimension of BSC that defining the activities of business units regarding customer and market segments determined by the managers and analyzing the activities with these measurements. The strategies set for customer and market segments have various metrics. Metrics such as customer satisfaction, customer retention, new customer acquisition, customer profitability etc. constitute the base of customer dimension of BSC.
- 3) *Internal Processes Dimension*: It means that defining internal processes which is needed for fulfilling the outcomes and the goals of BSC's other dimensions and supplying them by the managers. For example, constituting the internal processes needed to meet business stakeholders / owners' financial expectations or providing customer satisfaction and business outcomes.

- 4) Learning and Growing Dimensions: It is about learning and growing dimension of BSC that defining the required hardware and infrastructure which the business get growth and development in long-term. Meeting the customers' expectations in long-term and business' internal processes are related to the innovative ability of the businesses. Employee training, renewal of information technology and systems and reorganization of business operation procedures are also related to the learning and growing dimension of BSC.

After developing as a tool of measuring and evaluating the performance, BSC becomes a tool of used in combining the business' routine activities with business' long-term plans and controlling them. With this, BSC is a tool which provides a road map to the executors in instituting the corporate strategy, beside being a performance measuring tool (Kaplan and Norton, 2000; Sordo, et al., 2012).

3. Literature Review

BSC is used in manufacturing firms, service businesses, non-profit enterprises and public institutions and gives efficient results (Kaplan ve Norton, 2001). As we look at the works in literature, it is obvious that practice of BSC is wider in for-profit organizations, but there are also some practices in non-profit organizations. Looking into the literature about BSC and education institutes, the number of works that both issues evaluated together is scarce (Yuksel and Coskun, 2013). The accounting education and the works about efficiency in education are examined as reviewing the literature. The works about BSC in public institutions and non-profit organizations are examined for BSC study. In line with this, the path followed to analyze a non-profit organization with BSC for performance and the criteria are determined in this study.

In Dodor et al., (2009)'s study, BSC's theoretical framework are examined and suggested BSC structure according to public institutions for meeting the needs of Governmental Accounting Standards Board (GASB). The customer dimension of BSC are converted to the service dimension because there are some differences between the practicing in Private and Public Sectors. In the study, it is indicated that BSC system can be used in the public institutions. Thompson and Mathys (2013) suggest that the "personnel dimension" must be added to the four dimensions of BSC.

Lusher et al., (2012) examine the efficiency of accounting education in two different groups at an university. One of the groups are educated in the traditional education method (a computer, a projector and a trainer) and the other group are educated in computer-based education method (one computer for each student) and after that the results are compared with each other. It is found that the students educated in computer-based education are successful than the students who are educated in the traditional way.

By their work, Fortin and Legault (2010) describe the award-winning and co-educational approach to train the individuals who are qualified in accounting and who have the requirements for the profession of Independent Accountancy at an University of Canada. After the results of 32-item questionnaire, they find the result that it is important for considering the co-educational approach by the faculties and it is profitable for the students' qualification.

Cronje and Vermaak (2004) compare the structure of potential BSC which can be used in the accounting departments of two universities in South Africa and Australia. Similarly, they implement a survey about determining the size and criteria for measuring the performance of the accounting departments. The result is that BSC is a tool of planning and supporting the accounting education and a potential tool for developing accounting education.

Wu, et al., (2011), interpreted BSC practicing as a performance tool within continuing education centers in three universities. In the study, they find that the learning and growing dimensions are most effective and it can affect the other three dimensions. Similarly, it is referred that the financial dimension and internal processes dimension have an important role in evaluating the continuing education centers' performance.

In Stanley and Marsden (2012)'s study, the approach of "Problem Based Learning" are examined as the using in accounting education. With the approach, it is found that the students are more active in learning, questioning skills, susceptibility to teamwork and problem-solving abilities.

Yuksel and Coskun (2013), are examined the using of BSC approach in the education institutes for supporting and increasing the organizational performance. In the work, it is suggested a BSC model which is fit for the highschool in Turkey. They find that as BSC model is applied to the highschool, the more effective results can be achieved at strategy-oriented operation and institutions in reaching the goals. Aljardali et al., (2012), make a practice by constituting the framework in BSC using in the higher education institutions of State.

4. Research

In the study, the accounting education in Karamanoğlu Mehmetbey University (KMU), Faculty of Economics and Administrative Sciences (FEAS), Business Administration are examined within BSC method.

With the method which provides a holistic perspective, the strengths / weaknesses are specified and the results are interpreted.

4.1. Purpose

The study has two aims basically. First is to analyze the efficiency of the education by creating a model under BSC's four dimensions and the factors effective in the accounting education at KMU. Similarly, by the analysis the current situation of the accounting education will be set forth and whereby it will be done that a BSC practice which direct the managers about future plans and programs by specifying the strength and weakness in the education. Second is to contribute to the literature by modelling BSC for the using of universities of State.

Table 1: Demographic characteristics

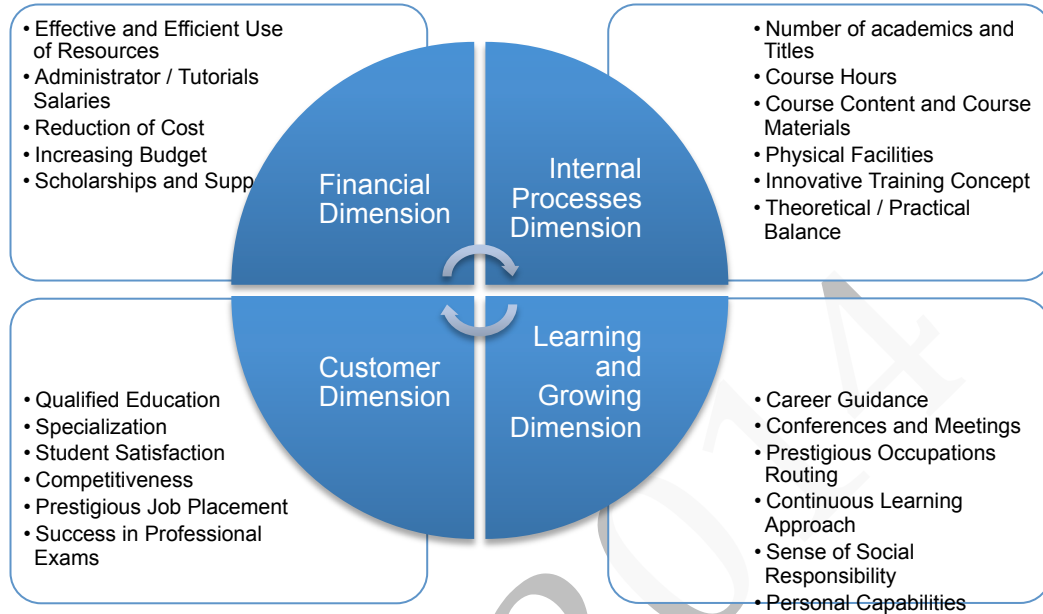
	Frequency	Percent (%)		Frequency	Percent (%)
1. Gender			2. Class		
Male	88	38,6	3rd Grade	128	56,1
Female	140	61,4	4th Grade	100	43,9
Total	228	100,0	Total	228	100,0
3. Highschool Field			4. Reason for Preference of FEAS		
Trade School	4	1,8	Professional Career	60	26,3
High School	6	2,6	Legal Requirements	21	9,2
Science High School	28	12,3	Familial Preferences	21	9,2
Public High School	190	83,3	Personal Preferences	126	55,3
Total	228	100,0	Total	228	100,0
5. Targeted Field			6. Has FEAS meet your expectations?		
Banking and Finance	56	24,6	Yes	191	70,6
Financial Advisors	22	9,6	No	67	29,4
Self-Employed	16	7,0	Total	228	100,0
Public Sector	87	38,2	7. Age		
Marketing	8	3,5	17-20	6	2,6
Entrepreneurs	18	7,9	21-24	203	89,0
Other	21	9,2	25 and over	19	8,3
Total	228	100,0	Total	228	100,0

4.2. Scope and Methodology

In the study, the aims concerning four dimension of BSC and the metrics concerning the aims are primarily determined. The data collected from the faculty management, department management and students is used in the process for the dimensions. A survey is applied to the 3rd and 4th grade students of business administration department for analysis of customer size, internal processes, learning and growing dimensions of BSC, beside the data collected from the managements.

There are totally 560 students of which 230 students in 3rd grade, and 330 students in 4th grade in the business administration department. In this study, the survey is applied to 228 students of which 128 students in 3rd grade and 100 students in 4th grade and which are selected randomly. The demographic characteristics are shown in Table 1.

The students (n=228) of 88 participated in the survey are male and 140 are female. The age range of most of the participants are 21-24. Being only 4 students from trade high school can be interpreted as 98,2% of the participants haven't been meet with the accounting courses. The conclusion of 38% of the participants plan to work at public sector and 24% of them plan to work at banking and finance sector can be read as they would use intensely the knowledge gained from accounting education in their professional lives. The 70,6% of participants declare that the accounting education meet their expectations. The four dimensions of BSC practice and the



objectives and criteria concerning the four dimensions are shown in Figure 1.

Figure 1: The Balanced Scorecard

4.2.1. Financial Dimension

The financial dimension which is one dimension of the BSC practice includes the objectives such profitability, costs, sales volume and the measures concerning the objectives. In for-profit institutions and organizations, the sales and the profitability which is very necessary for maintaining of the businesses is related to the financial dimension of BSC. Similarly, it's for the private universities for they are for-profit institution. However, as a principle of social state approach, the financial dimension doesn't aim at profit, revenues etc. in the state universities which postgraduate education undertaken by the state. Therefore financial dimension is overlooked for it is a state university. The targets and measures which can be esteemed in financial dimension for BSC practice in the state universities are shown in Table 2.

Table 2: Financial Dimension	
Targets	Measures
1. Effective and Efficient Use of Resources	The budget allocated to the unit, the unit cost per student comparison
2. Administrator / Tutorials Salaries	Responsibilities field, course, comparison of student loads, Education level, Comparison of Performance / Fee, Administrator / Tutorials Surveys
3. Lowering Costs	The analysis of variable and fixed costs on a unit basis, effective purchasing processes,
4. Increasing Budget	Comparison of the share of Faculty, Department from the university budget
5. Scholarships and Support	Research scholars, congressional support, student scholarships

The financial dimension can be used for state universities as a performance tool at the efficient using point. In the study, the targets and measures is determined but excluded from the process.

4.2.2. Müşteri Boyutu

In the customer dimension of BSC, there are the students who are taken accounting courses in the business administration department. The targets and measures regarding the customer dimension are shown in Table 3. By the survey which is prepared as 5-point Likert scale and which is arranged by the accounting courses' outputs that taken by the 3rd and 4th students during undergraduate studies, the 22 question is applied to the students. Before the data from the survey questions are analyzed, they have been applied reliability analysis and Cronbach's Alpha value is found as 0,783.

Table 3: Customer Dimension	
<i>Targets</i>	<i>Measures</i>
1. Qualified Education	Student surveys after accounting courses during undergraduate education
2. Specialization	Student surveys, exam notes
3. Student Satisfaction	Student surveys
4. Competitiveness	Success in the national exams (KPSS etc.), Number of job placement after graduate
5. Prestigious Job Placement	Number of job placement in upper echelons of public or private institutions, Student surveys
6. Success in Professional Exams	Success in field of accounting, financial consultancy etc after graduate

The targets tended to reach during the accounting education process and post-graduate process demonstrate the features of the outputs which is obtained after accounting education. These are the targets in the customer dimension that providing of qualified education to students, realizing students to specialize in the provision of sub-fields of accounting, student satisfaction, gaining competitive advantage, placing students in the prestigious professions and gaining success in the professional exams. The measures determined to analyze are used for evaluating the current situation.

As shown in Table 4, the survey questions prepared by the content of the courses and knowledge equipment that gained by accounting courses given in KMU, FEAS, Business Administration Department. The mean of the answers is calculated. The customer dimension of accounting education is interpreted by comparing the questions less than 3 in average with the courses (In practice the "3" has been recognized as having sufficient knowledge of accounting).

Table 4: Data of Customer Dimension	Mean	Std.Dev.
1. I am able to compare and interpret the aims with the current situation of a company.	3,5132	,95944
2. I am able to evaluate fiscally the past performance of a company.	3,3947	1,04623
3. I am able to undertake the process of a company's decisions like mergers, acquisitions, dividend distribution.	3,2412	1,11405
4. I have sufficient knowledge about optimal capital structure of a business, determination of working capital and minimization of average cost of capital.	2,8026	1,00685
5. I have sufficient knowledge about the risk (financial, inflation, profit, cost etc.) management that a company faces.	3,2105	1,03229
6. I am able to reach the financial resources of a company at desired amount, cost or time.	3,2325	1,03396
7. I have sufficient knowledge of cost-measuring efficiently about a company's goods and services.	3,3860	1,04108
8. I have sufficient knowledge at reducing and controlling the cost of a company.	3,3772	1,01435
9. I have sufficient knowledge of determining the goods and services which add or not add value to a company.	3,1667	1,00586
10. I am able to carry the accounting processes of a company by a computer.	2,7807	1,34890
11. I have the skill of follow and analyze the national and international markets.	2,8640	1,06772
12. I have able to make inventory processes of a company.	3,7368	1,02869
13. I have sufficient knowledge about budgeting processes of a company.	3,2061	,89863
14. I have sufficient knowledge about revealing and controlling the situations in accounting practice like mistake, fraud etc.	3,2719	,99146
15. I have sufficient knowledge about constituting and processing the order of documents and accounting records of a company.	3,3509	1,03236
16. I have sufficient knowledge about constituting and processing internal control system of a company.	3,1535	1,04866
17. I have sufficient knowledge about Turkey Accounting Standards and Financial Reporting Standards.	2,8684	,99791
18. I have sufficient knowledge about preparing and interpreting fiscal tables of a company.	3,2851	,98997
19. I have sufficient knowledge about directing the resources of a company effectively and efficiently.	3,4693	1,02563
20. I am able to make an independent audit under Turkey auditing standards.	2,8684	1,10277
21. I have sufficient knowledge about the implementation of computer-based simulations of financial events.	2,5088	1,11257
22. I have sufficient knowledge about applying and interpreting legal legislations like Trade, Debt, Corporate, Income, Value Added Tax etc.	3,0351	1,02763

The mean of the question 4, 10, 11, 17, 20, 21 is smaller than 3 by the survey data. Evaluating by the targets of qualified education, specialization, success in the professional exams, the students of business administration don't considered that they are sufficient for the Management Accounting, Computerized Accounting, Turkey Accounting Standards and Auditing Accounting courses. It shows the need for computer applications in accounting education. Taking not the management accounting courses by the students of 3rd grade don't affect the data. Computing singly the mean of 4th grade students, the mean of management accounting becomes bigger than 3. Being optional and taking not by the students, the management accounting course decreases the mean under 3. In the data of Table 4, being under the mean demonstrates the management accounting course must be taken by the students.

The courses of accounting education in the customer dimension show the weaknesses. The questions of 12, 1, 19, 2, 7, 8 have the biggest mean. The answers indicate that students have sufficient capability for the Inventory Accounting, Financial Statement Analysis, Cost Accounting courses.

70,6% of the students declare that the accounting courses of KMU, FEAS meet their expectations generally. It is an important result for the satisfaction of the students as customer dimension. 66,7% of the students have a positive opinion about competitiveness, success in professional exams and gaining prestigious occupations.

4.2.3. Internal Processes Dimension

The internal processes dimension of BSC is to determine and constitute the internal processes for targeted outputs. The factors like the number of scholars in accounting education, the number of accounting courses, the contents of the accounting courses, etc. are related to the internal processes. Targets and measures about the internal processes of BSC are shown in Table 5:

Table 5: Internal Processes Dimension	
Targets	Measures
1 Academic Number and Title	Number of accounting academicians, Total Students / Total academics
2 Course Hours	Number of compulsory and optional accounting courses, Total credit rate
3 Course Content and Course Materials	Student surveys
4 Physical Facilities	Number of physical facilities like classroom etc. used in accounting courses, Student surveys
5 Innovative Training Concept	Student surveys
6 Theoretical / Practical Balance	Education-training plan, Student surveys

The number of the academicians in KMU, FEAs is 3. The distribution of the academicians is such 2 assistant professors and a prelector. The number of the accounting courses given during four years is 12 courses, of 8 is compulsory and 4 is optional. The total credit of accounting courses is 29 and the total credit of the department is 130. 22% of the courses is comprised of accounting lessons of the student in their four years education. The data concerning the questionnaire about the internal processes is shown in Table 6:

Table 6: Data of Internal Processes Dimension	Yes		No	
	n	%	n	%
1. Accounting courses have sufficient credit in total courses during four years.	184	80,7	44	19,3
2. The course materials used in accounting courses are sufficient.	111	48,7	117	51,3
3. There is a balance of theoretical knowledge and practical in accounting courses.	127	55,7	101	44,3
4. There are sufficient instructors in accounting courses.	163	71,5	65	28,5
5. The physical facilities used along courses such as the number of classes, computers, projectors etc. are sufficient.	87	38,2	141	61,8
6. The number of accounting courses are sufficient for providing required equipment after graduate.	131	57,5	97	42,5
7. I am aware of the updates about accounting field in the accounting lessons.	110	48,2	118	51,8
8. I consider that I can be successful in the exams like KPSS etc. after graduate.	152	66,7	76	33,3

As seen in Table 6, the students consider sufficient (80,7%) the total hours of accounting courses in their four-year education. Similarly, it is obvious that the number of instructor is sufficient (71,5%), and there is sufficient number of accounting courses (61,8%) for the knowledge need after graduate. And again, we can see that the students aren't aware of (51,8%) the updating of accounting field and the course materials used in the accounting courses aren't sufficient (51,3%).

4.2.4. Learning and Growing Dimension

The learning and growing dimension is about acting futuristically and adopting innovative approach. Constituting the infrastructure provides growing and expanding in long-term, forming by the other dimensions of BSC are involved with the learning and growing dimension. The targets and measures about learning and growing dimension are shown in Table 7.

Targets	Measures
1 Career Guidance	Student surveys
2 Conferences and Meetings	Number of conferences and meetings regarding the field of accounting
3 Routing Prestigious Occupations	Student Surveys
4 Continuous Learning Approach	Student Surveys
5 Sense of Social Responsibility	Student Surveys
6 Personal Capabilities	Student Surveys

The efficiency of the outputs of accounting education can be possible by meeting the expectations from the outputs in long-term. Being a leading concept in their professional careers, the learning and growing dimension has an important role in gaining the skills such as being qualified individuals, analytical thinking and continuous learning approach and so on. For this purpose, the survey questions are shown in Table 8:

	Yes		No	
	n	%	n	%
1. The accounting education that I took reveals my leadership ability.	93	40,8	135	59,2
2. I get the ability of analyzing both theory and practice together by the accounting education that I took.	122	53,5	106	46,5
3. The accounting education that I took provides me gain sense of social responsibility.	145	63,6	83	36,4
4. The accounting education that I took develops my analytical thinking skills.	158	69,3	70	30,7
5. I get the sense of continuous learning by the accounting education that I took.	160	70,2	68	29,8
6. I get the ability of minimum economic and financial literacy by the accounting education that I took.	129	56,6	99	43,4
7. I can steer my career by the accounting education that I took.	122	53,5	106	46,5
8. On university career days, there are sufficient presentations about the current and future potential business opportunities.	97	42,5	131	57,5
9. There are sufficient meetings with successful people such as bankers, economists, financial managers etc.	67	29,4	161	70,6

As seen in Table 8, the students show that they gain the concept of continuous learning by the accounting education. Again, they declare that they gain the skill of analytical thinking (69,3%), sense of social responsibility (63,6%) and the ability to transfer theory into practice (53,5%). Adopting the concept of continuous learning for students and gaining ability of analytical thinking update the knowledge and give the skill of adapting changing circumstances and conditions.

Making insufficiently assemblies (70,6%) with bankers, economists etc. and having insufficient number of business opportunities' presentations (57,5%) and gaining hardly the skills and leadership of the individuals (59,2%) who would be the entrepreneur of future are the weaknesses of learning and growing.

5. Conclusions and Recommendations

The strenght and weakness of the accounting education in business administrative department are identified with the practice of measuring the efficiency in accounting education on the base of section by BSC which is one of the performance measuring methods. Similarly, a model which can be used as science-based in the state universities is suggested in the study. The results with the study are evaluated under the four dimensions of BSC.

The financial dimension is excluded from the study for the university used in the work is a state university. In state universities, the education is non-profit. So the financial dimension of BSC can be used as a performance indicator for using more efficiently the resources rather than profit purposes.

The students consider the accounting education given in the business administration department is generally sufficient as understood by the survey. In details, the students declare that they are sufficient for Inventory Accounting, Financial Statement Analysis, Cost Accounting courses. However they don't find themselves sufficient about Management Accounting, Computerized Accounting, Turkey Accounting Standards and Auditing Accounting courses. Being educated in 4th grade and not being educated in 3rd grade classes, the result for the Management Accounting is negative. If the data is used for the students of 4th grade, the result is positive

about that students are sufficient for the lesson. Being not enrolled in sufficient number to the Computerized Accounting course causes not opening courses for this lesson. So it brings about negative results. The recommendations about the customer dimension of BSC are increasing the knowledge level of students by explaining the importance of the Computerized Accounting course, making required arrangements by determining the problems about Turkey Accounting Standards and Auditing Accounting course.

As internal processes dimension, we find that students consider the number and hours of accounting courses are sufficient. Similarly, they declare that they have the accounting skills after graduating needed in their professional careers in the future. And also we find that the physical conditions like the number of classes, computer, etc. used in accounting courses are insufficient. They declare that they are not aware of the updates in the field of accounting and the materials used in the lessons are insufficient. Our recommendation for the internal processes dimension are completing the missings by checking the physical conditions like the number of classes, computer, etc., serving all resources which provide the developments about accounting to the students and reorganizing the course materials according to need.

The students declare that they don't gain the skill of continuous learning at the learning and growing dimension. The students who state they gain skill of analytical thinking, sense of social responsibility and the ability to transfer theory into practice symbolize the strength of the learning and growing dimension of accounting education. They express that they don't make sufficiently assemblies with the experts as bankers, economists etc. And also the students signify there are not sufficient meetings about leading their professional career and presenting business opportunities on which mutual exchange of ideas performs. The recommendations about the dimension is making assemblies gathered students with people in the business world. So the students are gained perspectives and ideas that help them about their career planning.

In order to apply in state universities for the future works, the efficiency for resource utilization concerning financial dimension may be analyzed. Also analysis can be made with the data added from the academicians and business world.

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A Comparative Book Review

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Abstract

This paper presents a comparative review of the books, *Value-added leadership* by Sergiovanni (1990) and *The school leaders our children deserve* by Theoharis (2009). It brings forth common threads that run along the two and renames them as emerging themes. Common themes found are: optimism, determination, shared decision-making, professional attitude, sense of responsibility, untiring endeavours, motivation, capacity building, holistic development view, academic excellence, and leadership domains. The leadership styles found in both books mirror each other in terms of their emphasis on the human component of leadership. This paper further discusses the significance of themes in leadership and puts forward recommendations for future research and for the implementation of the suggested leadership styles in the schools.

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Peer-review under responsibility of the Sakarya University.

Keywords: leadership styles, educational leadership after 1990s, human component of leadership

Introduction

Leadership is complex (Fullan, 2001), decisive, and essential for the success or failure of any organization. Educational institutions are no exception to that. Educators have been suggesting and proposing different leadership styles for many decades. As a result, on the continuum of leadership styles, from autocratic leadership educational researchers have reached to leadership for social justice. Though it is logical to expect minimum difference between various styles on this continuum, many of them focus on same main ideas in leadership. *Social justice leadership* by Theoharis (2009) and *Value-added leadership* by Sergiovanni (1990) could be an example of those leadership styles. Shared focus of two or more styles may have significant implications for educational leadership. Therefore, this paper presents a comparative book review of *Value-added leadership* (Sergiovanni, 1990) and *The school leaders our children deserve* (Theoharis, 2009). It starts from the short summary of the *Value-added leadership*, followed by some details of the content of the book. It describes *The school leaders our children deserve* in a similar way. It then discusses the common emerging themes in both concepts and draws some conclusions.

Value-added Leadership

In *Value-added leadership*, Sergiovanni (1990) proposes a Value-added leadership for extraordinary performance in schools. This book can be considered as a comprehensive, concise, and portable encyclopaedia of value-added leadership. It develops the ideas on examples from the real world of business and education. Thus, the ideas appear to be more practical and realistic. The coherence and fluency in the presentation of the core idea (value-added leadership) grabs the attention of the reader. Sergiovanni focuses on the way leadership is enacted in the school context and says, "Leadership is a very powerful force that can deeply influence the drive and commitments of teachers and students much more than the use of authority and management controls" (Sergiovanni, 1990, p.10).

Sergiovanni's understanding of value-added leadership is:

A covenant is a binding and solemn agreement by principals, teachers, parents, and students to honor certain values, goals and believes; to make certain commitments to each other; and to do or keep from doing specific things. It is the compact that provides the school with a sense of direction, on the one hand, and an opportunity to find meaning in school life, on the other.

Value-added leaders bring to the school a vision but focus on the building of a shared covenant. The two together comprise the leadership dimension of purposing. (p.20)

In the beginning of the book, Sergiovanni highlights some issues in American schools and then sets the stage for value-added leadership. He argues that, “value-added leadership can help restore the spirit of ‘Gambare!’ in our school and society itself” (Sergiovanni, 1990, p.5). By ‘Gambare’ he means persistence. However, “the restoration of prominence in our school system will require that some of the spirit, drive, commitment, and sense of moral responsiveness that brought about such prominence in the first place be recaptured. Value-added leadership can help in this effort” (Sergiovanni, 1990, p.8). His seemingly unconditional trust in the value-added leadership rests in his belief that, “It has the capacity to renew the American spirit and to set us back on the track to success once again” (Sergiovanni, 1990, p.8).

In the second part of the book Sergiovanni provides readers with a basic framework for value-added leadership. The framework comprises nine value-added dimensions, which include: leadership, extraordinary performance investment, providing symbols and enhancing meaning, purposing, enabling teachers and the school, building an accountability system, intrinsic motivation, collegiality, and leadership by outrage. He explains each dimension in detail and compares them with the similar aspects of value-leadership. He concludes that value-added leadership is more human, practical, and moral than value-leadership. To strengthen the moral idea he has given a clear distinction between congeniality and collegiality. He argues that congeniality is more about “the climate of inter-personal relationships in an enterprise. When this climate is friendly, agreeable, and sympathetic, congeniality is high. Though congeniality is pleasant and often desirable, it is not independently linked to better performance and quality schooling” (Sergiovanni, 1990, p. 23). Conversely, “collegiality has to do with the extent to which teachers and principals share a common work value, engaged in specific conversation about their work, and help each other engage in the work of the school” (Sergiovanni, 1990, p. 24). Furthermore, Sergiovanni compares the concept of value-added leadership to planning in reverse, which stresses the building of human capacity, from skills to relationships between them, for improving schools’ performance. He concludes, “Planning in reverse is consistent to value-added leadership” (Sergiovanni, 1990, p. 51).

The third part of the book describes the significance of the proposed idea (value-added leadership). It gives four convincing reasons for why it should be enacted in American schools. Those reasons are: its latitude, practicality, rationality and responsiveness. The author points out that “the challenge of leadership is to translate values and ideas into actions and programs” (Sergiovanni, 1990, p. 82) and in his view value-added leadership can mitigate that challenge. He visualizes leadership as a set of five forces available to leaders that includes: technical, human, educational, symbolic, and cultural (Sergiovanni, 1990). He recognizes that “schools are human-intensive and the inter-personal needs of students and teachers are of sufficient importance that should they be neglected school problems are likely to follow” (Sergiovanni, 1990, p. 87). He basically brings out the human aspect of leadership. The core idea lies in the acknowledgment of the kind of relationship among the people in the school.

The fourth part of the book draws 3 E’s model of value-added leadership. According to him the three E’s of value-added leadership are Empowerment, Enablement, and Enhancement (Sergiovanni, 1990). He values the participation of parents and vividly presents compelling reasons for which they should be involved in school’s governance and the process of schooling. The reasons include: democratic reason, practical reason and moral reason. According to him involving parents in school’s affairs is their democratic right. Their involvement may help to develop some harmony in the schooling process and students’ social needs; thus it may have practical implications. And the third reason is moral, which means that parents’ involvement represent schools’ commitment to justice and equity in an increasingly diverse environment.

The core idea of the book is the proposal of the kind of leadership that values human inclusion,

integrity, and self-esteem of the people working in a school; a leadership that strives for excellence, creates opportunities, and takes responsibilities; and that inculcates a sense of ownership, and nurtures the idea of family and teamwork.

The school leaders our children deserve

The book, *The school leaders our children deserve* written by Theoharis (2009) presents findings of a project, across several years with seven successful principals, that investigated the possibility of leadership for social justice. The concept of social justice encompasses inclusion and untiring endeavors for continued progress in all students' achievements. The book articulates the attributes of socially just leaders, the barriers to them, and the strategies that they deploy to overcome those barriers. It also talks about the adverse effects of principals' persistent tackling with the complexities of their leadership context on their physical and mental health. It concludes with the reassurance of the importance of leadership for social justice in education.

The first part of the book delineates the methodology of the research study and introduction of research participants, including himself (he is one of the research participants). Also, this part portrays the summary of leadership for social justice, its basis, and significance. Moreover, this part brings forth common traits among all research participants. All of them differed in terms of their career's trajectories, personalities, and their leadership contexts. Theoharis, (2009) found:

Yet all shared a number of values and practices. All believed that their schools had been failing many students and all knew their schools could do a lot better – that all students were capable of excellence and should be given an education befitting such tremendous potential (p. 2).

They were committed to social justice. They recognized the importance of empowering teachers and deliberately put mechanisms in place for democratic governance. Though they trusted their teachers' competencies, they had a well-developed accountability system in place (Theoharis, 2009). Furthermore, they “devoted hours and hours to professional development – not just the week before school or a day at Halloween but continuing over the years” (Theoharis, 2009, p.2). They believed in inclusion and discussed openly about race with all stakeholders. “The seven principals opened their offices daily to parents and teachers” (Theoharis, 2009, p.2). Also Theoharis, (2009) says:

They attended community meetings and invited parents for pizza in their offices. They visited and called students' homes. They knew that along with having good teachers, the best schools are deeply connected to families – but that many parents felt unwelcome or unsure of their place at school (p.3).

He shares the definition of social justice leadership, which draws upon all the above stated qualities of successful principals.

The second part provides the details of the concepts presented in the first part. Theoharis describes a relevant anecdote about his research participant first and then introduces the idea, which makes the new idea very practical in a real context. He presents the key ideas of the concept under the following themes; Acquire broad, re-conceptualized consciousness/ knowledge/ skill base, Possess core leadership traits, Advance inclusion, access, and opportunity for all, Improve the core learning context – both the teaching and the curriculum, Create a climate of belonging, Raise students achievement, and Sustain oneself professionally and personally.

The third part of the book consolidates the unanticipated aspects associated with practicing leadership for social justice. These adverse effects consist of the depression, disturbances and disparity. To substantiate, “all were exhausted and had known periods of despair and nihilism in their years of work. They cried, they lost sleep, and their personal relationships suffered” (Theoharis, 2009, p.4). However, the last part of the book brings forth the meaningful learning from the toils of the research participants and their more enlightened perspectives of the schooling process. He says, “through their struggles, however, they learned about themselves, established new ways to build supportive coalition, and made time for rejuvenating their spirit” Theoharis, (2009, p.4) Theoharis conceptualizes SJL as “to mean that the principals highlighted here kept at the center of their practice and vision issues of race, class, gender, disability, sexual orientation, and other historically marginalized factors in the

United States” (2009, p.11). Bogotch argues that, “It requires ongoing struggle, advocacy and reflection” (as cited in Theoharis, 2009, p.11).

In short Theoharis (2009) also proposes the kind of leadership that values human inclusion, integrity, and self-esteem of the people there. That strives for excellence, creates opportunities, and takes responsibilities. That inculcates the sense of ownerships, and nurtures the idea of family and teamwork.

Discussion

The comparison of both books reveals similar patterns of ideas. The ideas include: Optimism, Determination, Shared decision-making, Professional attitude, Sense of responsibility, Untiring endeavors, Motivation, Capacity building, Consciousness of the relationships’ importance, Holistic view, Leadership domains, and Academic excellence.

Theoharis extends the leadership from its characteristics and significance to the barriers in its way. However, the resistance against the leadership is not strong enough to break the flow of their activities; rather the resistance proves to be opportunities for personal and professional growth. Though limited scope of the study leaves question regarding its applicability in other contexts, it gives significance guidelines to future principals.

The two styles of leading discussed above are very similar to each other, thus signifying that the qualities mentioned under each style are crucial for a successful leader. Both acknowledge the importance of empowerment. Many empirical research studies, for example Blasé and Kirby (2000), are evidence of the positive influence on the culture of the school when teachers, parents, students, and the community are empowered. In addition, there is growing recognition of the idea that the type of relationships in the leadership context affects decision-making approach, which in turn, determines the fate of an organization (Sergiovanni, 2005). These models insist on strengthening collegial relationships among the stakeholders. Building collegial and collaborative relationships among all stakeholders support positive cultural changes (Schein, 1992). Their emphasis on the school culture and shared decision-making process is well-documented in educational literature, such as Reitzug and Revves (1992); Schein, (1992); and Blanchard, Carlos, and Randolph (1996), to mention few.

Likewise, educational history witnesses many reforms and initiatives, which were successful for a short time, but eventually failed because of a weakness in the monitoring system. For any progressive organization, it is important to have a strong accountability system that makes people responsible of their actions. These models highlight accountability as an important component of effective leadership. Similarly, other concepts such as optimism, determination, willingness to share power, enthusiasm, motivation, and capacity building are being well discussed in literature as having a positive influence. Therefore, it seems like Sergiovanni (1990) and Theoharis (2009) have consolidated the components of effective leadership and a leader’s approaches within a single model.

5. What does it mean?

A quick glance of leadership styles in education in the 1970s, 1980s, and 1990s shows a stark shift from bureaucracy (Weber’s, n.d., “Based on top-down management theory”) to transformational leadership (Bass, 1990, “Based on relationships oriented theory”). However, this change did not take place suddenly. It spanned 30 years of continuous research on leadership styles. Though all perceived leadership styles are important, three of them show development of leadership models from a mechanical to a more humanistic view of leadership. The three prominent styles are: transactional (Bass, 1981), instructional (Glickman, 1985; Pajak, 1989 as cited in Blasé and Blasé, 1991), and transformational (Bass, 1990). Though more managerial in context, transactional leadership acknowledges the efforts of employees and suggests equal return. Instructional leadership recommends a combination of traditional management and human aspects of leadership (McEwan, 1998). Transformational leadership allows for a collaborative way of decision-making.

Transformational leadership could be considered as the beginning of a new wave among educational researchers. Since its inception, researchers are more focused on the 'science of leadership' that includes team building, communication, decision-making, conflict management, planning, and resource allocation (Leclear, 2005). For instance, Snyder, Wolf, and Acker-Hocevar, (1995) argue, "A change in culture is achieved in a large part due to the intrinsic motivation of all members, a socially-defined vision, and a commitment to continual improvement" (p. 7). Likewise Schein, (1992) relates nurturing culture with the intentional efforts made by a leader through role-modeling and proper instruction. Sergiovanni (1990) focuses on the same aspect of leadership. Thus, value-added leadership proves to be one of the stepping stones in the new wave.

The purpose of the above analysis is to show the incremental development in the value-added leadership style. Moreover, all of the suggested leadership styles after the 1990s share similar characteristics to transformational and value-added leadership. Even Sergiovanni's (2001; 2005) continued to contribute to same aspect. This is an important finding for many reasons. First, the characteristics are more important than the name of the style so there is need to put efforts to inculcate the emergent qualities in present and prospective school leaders. One of the ways to help prospective principals could be including this aspect in their formal preparation curriculum. Second, regardless of its name (value-added or social justice leadership) the proposed leadership model stresses the human aspect of leading. Therefore, it is important to agree on certain policy level adjustments to assure, at the minimum, inclusion, capacity development, and quality teaching learning processes in all schools. Third, if learning from nearly 20 years of research, carried out in different contexts and from differing perspectives, converge on the same point then it means that point should be treated as a pressure point for bringing about change for the better. Therefore, this comparative review suggests that the time has come to plan and implement the learning from previous studies in schools and assess their results. It also recommends devising implementation strategies for bringing about the intended attitudinal change in American schools.

The comparative book review of *Value-added leadership* and *The school leaders that our schools deserves* revealed that effective school leaders share common characteristics. All converge toward the humanistic attributes of the leader. Though difficult to generalize, they may provide guiding principles for present and prospective school leaders.

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A comparative examination of the family-based early intervention programs developed in Turkey and in the USA in the last decade

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Abstract

Starting to be implemented as of the 1960s, early intervention programs are frequently employed at the present time. Researchers develop and implement early intervention programs in various subjects and areas. These programs may be family-based, school-based, community-based, or a combination of them. This study aimed at comparing the early intervention programs developed in the USA and in Turkey in the last decade in terms of duration, implementers, participants, implementation process, assessment tools, and effects.

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Peer-review under responsibility of the Sakarya University.

Keywords: Early intervention, family-based, USA, Turkey

Introduction

Early childhood education has gained more and more importance in recent years. The recent research shows that the experiences introduced to a child in the early childhood period determine his/her welfare level in the future life, and offer an opportunity for improving his/her skills, abilities, and creativity (Keating and Hertzman, 2000).

The concept of early intervention has been defined in various ways in accordance with different needs. "Early intervention" refers to activities or works aimed at determining the children in the school period or in smaller age groups that have a risk to have, adopt, and develop an inappropriate behavior or situation and have a special need that hinders normal development process, and preventing such problems or risks (Karoly, Kilburn and Cannon, 2005). Similarly, Gargiulo (1995) and Gargiulo and Kilgo (1999) define early intervention as practices, arrangements or programs developed in order to meet the needs of infants and children concerning their disadvantages resulting from being in a developmental risk group or having one or more than one disability (Cited by Şahin, 2012). Bekman and Koçak (2011) describe early intervention as programs aimed to support those children who are likely to experience troubles in development due to negative environmental conditions. If necessary interventions are not provided timely for children whose development is under risk, cognitive, motor, social-emotional, and language development-related retardation may be experienced by these children in the future (Şahin, 2012).

The main purpose of early intervention programs is to decrease and eliminate (if possible) the factors hindering the development of children, and to increase the inputs that support their development. Another purpose of early intervention programs is to provide parents with necessary knowledge and skills in order to strengthen their self-confidence and enable them to support the language development, cognitive development, social development, emotional development, and motor development of their children (Shonkoff, 2000; Werner and Johnson, 1999; Cited by: Bekman and Koçak, 2011; Atay et al., 2005; Cited by: Şahin, 2012).

In essence, the primary goal of early intervention and prevention programs is to offer, before analyzing the existing problem, practices aimed at providing long-term social and economic benefits for children, parents, and the society they live in. Another main purpose of early intervention and prevention programs is to change the balance between risk factors and protective factors (Karoly, Kilburn and Cannon, 2005).

Apart from the foregoing, the long-term results of early intervention programs are bringing about a rise in general educational level of the society, increasing employment rates for individuals to begin their professional lives more easily, and thus enhancing social productivity (Keating and Hertzman, 2000).

Basically, education begins in family. Children go to educational institutions as individuals bearing the traces of their parents. Thus, it is wrong to consider children independently of their parents. In this sense, another ultimate target audience of early intervention programs is people/parents who take care of children. Informing parents, making explanations about the developmental periods of children, cooperating with families, and helping them determine the needs of their children constitute an important part of early intervention programs.

There are three types of early intervention programs. The first one covers family education and other family supports (home visits, services, etc.). The second one focuses on and gives weight on early childhood education. The third one is a combination of these two approaches (RAND, 2005).

Family-based early intervention programs attribute a central and active role to family in terms of child development and care, and foreground family-child interaction.

Among the benefits of the early intervention programs taking family as a basis are increasing the interaction between children and parents/people taking care of the children, enhancing parenting skills, providing information about child development areas, supporting the social skills and other development areas of children, etc.

The current study dealt with the family-centered early intervention programs developed in Turkey and in the USA in the last decade. In this context, domestic and international studies published between 2004 and 2013 were addressed. Of the 14 studies included in the study, 11 were conducted in the USA, and 3 were conducted in Turkey.

.1. Early Intervention Programs Developed in USA

Florida School for the Deaf and the Blind—Parent Infant Program

The goal of this program, which was developed between 2007 and 2008, was to offer family support and trainings via a family-based intervention model, and to provide children with the best possible environment in early childhood period that was the basis of future learning and the most critical period of brain development. The target audience of this program was young mothers and children in the 0-6 age group who were in at least one of the following categories: cerebral palsy, metabolic disturbances, developmental retardation, physical disability, dual sensory impairment (deafness-blindness), complete mental disability, trainable mental disability, speech/language handicap, adoption, genetic disorders, educable mentally retarded, hearing-impaired, visually impaired, and mentally challenged. Domain experts and family counselors were the implementers of this program. During the program, regular home visits were paid to families with children in the 0 to 3 age group who had vision and/or hearing loss. Home visits provided information, support, and service coordination through family counselors. These experts used nationally known models as a source (SKI*HI – hearing loss, INSITE – loss of sense and other challenges, VIISA – visual loss). The responsibilities of family counselors in this process were as follows:

- Leading the agencies, doctors, and parents participating in the process,
- Watching the developmental levels of children, and following and evaluating the continuous visual and auditory functions of children,
- Helping families determine priorities, concerns, and goals, and documenting them in the Individual Family Support Plan,
- Cooperating with families to determine the strategies to be implemented in intervention programs through considering the special needs of children,
- Joining medical appointments, physical and professional therapy sessions, and other necessary evaluation processes in order to provide families with meaningful information,
- Providing technical support for local early steps efforts, and helping understand the impacts of loss of sense and the effectiveness of appropriate early intervention programs, and
- Contributing to the process of transition from family-based intervention to institution-based intervention, and planning this process.

Satisfying the social, emotional, and educational needs of children and families was one of the main benefits of the program.

Parent Advocacy Support Education

Developed between 2007 and 2008, this program aimed at strengthening parenting skills and enhancing their parenting competences. The program intended to teach the following to mothers and people taking care of children by helping mothers:

1. Their strengths to solve the problems they encountered or were exposed to as well as the sources they could employ,
2. The way of accessing external sources like friends and neighbors besides service establishments.

The target audience of this program included children under risk, pregnancy complications, infants/children exposed to medication, parents exposed to medication, young mothers, and people going through maternal depression. The program started in the prenatal period, and continued until the infant was almost 1 year old. In this program, 10 collaborators with whom families could establish a communication were appointed to every family. These collaborators were home visitors and parenting education specialists. Children and their parents participated in the program where the process started in the prenatal period, and continued until the infant was almost 1 year old. The process involved home visits and parenting lessons. Home visitors/parenting education specialists helped parents or people taking care of children when they encountered new difficulties or different situations about the children. The PIPE (Partners in Parenting Education) program was implemented in home visits. It provided parents with an opportunity to listen to their infants, share their love with them, and play with them. In this way, parents dealt with their children individually. During home visits, it was aimed to create an infant book to emphasize how parents started to know and enjoy their infants. Thus, home visitors worked with parents. Another purpose was to prepare a photo documentary on infant's first year, and to document the interaction of family in the process. The goals of the project were evaluated by the project staff for continuous quality development through monthly examinations including participation journals, participant progress notes, and session journals. Home visitors/parental education experts examined the progresses and problems experienced by the children and adults.

Socially and emotionally supporting children and families was one of the main benefits of the program.

Childnet – Pinellas

The primary objective of the program developed between 2007 and 2008 was to prevent the care of children by people other than their parents. The program was designed to protect and maintain family integrity/unit when parents or people taking care of children had physical or emotional deficiencies, parents needed help to care for their children with a high risk or a chronic disease, or family went through a crisis. The target audience of the program involved abused/ignored children, children with a low birth weight, infants/children with a chronic illness, adults with pregnancy complications, and children and adults experiencing crisis situations. The program covered the period from the prenatal period until the age of 18. The program was implemented by 1 family supporter. During the program, the family supporter helped parents create a family environment full of love, protective, and stimulating/inspiring. The family supporter taught many skills to parents. These skills were not limited to only budgeting, discipline, growth and development of children, cleaning, organization, nutrition, cooking, and parental skills. Meeting the social, emotional, educational, and economic needs of families was one of the main benefits of the program.

Achieve Tampa Bay

It was an early childhood program developed between 2007 and 2008 for children with a typical development and for children with any disability or a retarded development. The target audience of the program was young mothers, children with attention deficit/hyperactivity, children with neurological diseases, children with autism, children with pervasive developmental disorders, children with cerebral palsy, children with phonologic problems, children with physical disabilities, infants/children with retarded development, infants/children exposed to medication, totally mentally retarded children, trainable mentally retarded children, children with speech/language disabilities, children with genetic disorders, children with spina bifida, and children with learning disabilities. The program covered the period from prenatal period to adolescence period. During the program, a therapy program was implemented. It offered a professional, physical, and speech therapy to children from birth to adolescence period. In addition, families received support from family groups and brother support groups. The program met the medical, social, emotional, physical, financial, and educational needs of families.

The Little Snowflakes

The purpose of the program was to provide parents with parental opportunities to support the development of their children. The program was implemented in the upper mid-western communities of the USA. Its target audience was parents. The program may take 4 months to 16 years. In the accessed implementation of the program, a training lasting 7 weeks was given to each family. The program was implemented by 7 experts providing individual services: 1 program coordinator, 2 full-time members, and 4 part-time members (20 to 30 hours a week). 2 were occupational therapists, 2 were speech-language pathologists, 2 were early childhood special education experts, and 1 was social service expert. 4 families participated in the accessed program. Each family had 1 child with a special need who was 10 to 30 months old. The special needs of the children were cerebral palsy, Down syndrome, severe hydrocephalus, and spina bifida. In the implementation process of the program, home visits taking 60 to 90 minutes were paid once a week or month. A typical home visit consisted of planning, welcoming, activities, observation, presentation, information sharing, follow-up, and programming. The assessment stage of the program consisted of the steps of observation (through video-recording in each home visit), interview (Spradley's 12-step ethnographic interview), interview

when the family was ready (through tape recording), and reviewing the documents. The program supported children and families socially, emotionally, and educationally.

Intervention With African American Premature Infants

The target audience of the program was African American premature infants (3 to 4 months) and their mothers. Implemented between February 2002 and December 2004, the program reached 173 families, 84 of which made up the intervention group, and 89 of which constituted the control group. The program comprised of 8 sessions, and lasted 20 weeks. The program was implemented in two parts. The first part was infant massage designed for supporting the development of infants and performed by parents. In this way, an attempt was made for parents to notice the clues hard to perceive provided by their children, and to develop a bigger sense of intimacy with their children. The second part was a parents-focused psychoeducational intervention aimed at informing parents about what to do with their premature infants as well as the needs of these infants, and helping them understand the infants in the best way, give proper reactions to them, and support their social behaviors. Three data collection methods (unstructured ethnographic interviews, participant observation, and the review of program documents) and two types of triangulation (methodological triangulation and data triangulation) were employed.

The intervention section of the program consisted of psychoeducational video, Brazelton Neonatal Behavioral Assessment Scale, and the infant message performed by mother. It was determined that at the end of the intervention, mothers in the experimental group turned out to be more self-sufficient in comparison to those in the control group.

At the assessment stage of the program, the Bayley Mental Development Index scores of the infants were compared, and the experimental group infants were found to have higher scores (Beharie, Kalogerogiannis, McKay, Paulino, Miranda et al., 2011)

Medical Foster Care Program

The program aimed to support stepchildren medically, socially, psychologically, emotionally, and economically, to help medically complex children, and to support families socially, psychologically, emotionally, and educationally. The target audience of the program was medically complex children and stepchildren/adopted children in the 0 to 21 age group. The program was implemented in 2009. In the implementation process of the program, licensed stepparents/foster-parents were selected and trained to provide medically-supported personal care services for children with special needs and medically complex children. The program offered a family-based care for those children who were medically complex and did not receive any sound care service at their homes. One-to-one training and support provided for parents were quite effective in the progress of children. The program contributed to social, emotional, and psychological development of parents and children. It also satisfied the medical needs of children. The training support provided for parents separately from children was beneficial for parents. Since it provided home care, the program was cheaper than staying in hospital and hospital services. Thanks to the feeling of trust created by family and home environment, the program was emotionally efficient, and enabled children to feel themselves much better.

Responsive Teaching

Implemented by Mahoney et al. in 2005, this program aimed at supporting and enhancing the well-being of children by taking maximum advantage of the interactions of adults with their children in daily routines. The target audience of the program was children with special needs and their mothers. A total of 50 mother-child pairs participated in the program. Of the participating children, 20 had autism, and 30 had developmental retardation. The study consisted of 33 sessions taking more than 1 year. The tools used for assessing children were The Transdisciplinary Play Based Assessment (TPBA), The Temperament and Atypical Behavior Scale (TABS), Infant Toddler Social Emotional Assessment, video recording, Maternal Behavior Rating Scale, and Child Behavior Rating Scale. The program created a progress of 64% in the cognitive development of children, a progress of 167% in their expressive development, a progress of 138% in their receptive language development, a progress of 36% in the social-emotional development of autistic children, an improvement of 21% in the self-regulation skills of children, and an increase of 28% in their social participation (Mahoney, Perales, Wiggers, Herman, 2006, <http://www.responsiveteaching.org/>).

Family Based Weight Management with Latino Mothers And Children (FOTM)

This program aimed to provide high-risk Latino families living in the USA with a weight management suitable for their culture. The target audience of the intervention program was Latino families with overweight children and their children. It was implemented for 8 weeks in 2007. Families on the Move (FOTM) was adapted from SHAPEDOWN developed by Slinkard and Irwin in 1987. A pedometer was given to each family that was asked to take ten thousand steps a day. Since SHAPEDOWN did not have any Spanish version, it was translated by two bilingual Mexican Americans. Taking 8 weeks, the study included the distribution of workbooks, the distribution and presentation of pedometers to mothers and children, weekly reading assessments, goal settings, and assessments. In the first meeting, workbooks were distributed according to the ages and development features of children (1st Level, 6 to 8 years old; 2nd Level, 8 to 10 years old; 3rd Level, 10 to 13 years old). Pedometers and Spanish family guides were given to mothers. In the 2nd meeting, mothers set their personal behavior goals (nutrition, physical activity, family support). For 8 weeks, mothers and children read about the importance of nutrition and physical activities. Foods were given to families in a list of calorie-free, light, heavy, and unnecessary, and they were recommended to eat light food and have smaller portions and do exercise for 60 minutes daily. FOTM was implemented by 1 Latino intern pediatric nurse, 1 doctorate nursing student, and 2 social service experts. 14 mothers and 18 children in the 6 to 14 age group participated in the program. A digital weighing scale, a wall-mounted stadiometer, and The Parent Perceptions of Child Appearance and Health Scale were used for assessment. At the beginning of the program, 73.3% of children were obese, and 26.7% were overweight. At the end of the program, 84.6% of the mothers stated that they managed to affect the eating habits of their children, and 92.3% of the mothers told that they enabled their children to be engaged in physical activity more. In addition, a great majority of the mothers said that their own eating and exercise habits affected their children. 78% of the mothers participating in the study started to be engaged in physical activity for minimum 30 minutes five days a week (James, Connelly, Rutkowski, McPherson, Gracia et al., 2008; AlMarzooqi, Nagy, 2011, <http://www.ncbi.nlm.nih.gov/pubmed/19238713>)

The Hope Family Project

It was a HIV and alcohol use intervention program aimed at training families living in homeless shelter and their children. It was implemented in 14 months. Implemented between March 2007 and May 2008, the program included children in the 11 to 14 age group and their families (102 parents and 122 children). The implementers of the program were 2 social service experts, 7 peer-community educators, 2 educators, and 2 coordinators from Bronx Community.

3 evidence-based programs were used as a guide during the creation of this program: CHAMP-NY: 4-7th Grade, The Strengthening Families Program (SFP), and Sista Project. Sessions and topics were as follows:

- 1st Session: Introduction and family communication
- 2nd Session: Tracking and control
- 3rd Session: Self-respect and peer pressure
- 4th Session: Adolescence
- 5th Session: HIV/ AIDS/ STI
- 6th Session: Substance use
- 7th Session: Domestic violence
- 8th Session: HOPE family game.

Demographic information of children and families (developed by the authors), questions concerning shelters, The Within Family Support Subscale, Family Assessment Measure, Parenting Skills Questionnaire, Family Stress Scale, Monitoring the Future Survey, and Brief Symptom Inventory were used as measurement tools.

In the end, the program led to an improvement in the communication skills of the families participating in the program in special topics, helped them learn new things about one another, and raised an awareness regarding HIV and AIDS (Beharie, Kalogerogiannis, McKay, Paulino, Miranda et al., 2010).

Fit Kids/Fit Families (FKFF)

The goal of the program was to decrease and prevent overweight and obesity in childhood, increase physical activity, improve family health, and reduce body mass index. It lasted 12 weeks in 2005. 68 children in the 5 to 16 age group and their families participated in the program. Changes for healthy life were introduced, and weekly nutrition and activity lists were given to the participants. In addition, two-hour meetings were conducted with the participants every week. The assessment tools used in the program were Rosenberg Self-Esteem Scale, journals, a weighing scale, and a meter. The program was implemented by a dietitian, a behavioral scientist, and an exercise specialist. Fit Kids/Fit Families had the following effects:

- Knowledge and behaviors about healthy life decreased [P2] among the children and families.
- An increase occurred in physical activity among 59% of the children, and a decrease of 32% occurred in sedentary activities.
- A decrease of 81% occurred in body mass indices, and thinning was observed in the waist circumferences of 74% of the children.

An improvement occurred in the self-respect of 66% of the children participating in the study (AlMarzooqi, Nagy, 2011, <http://www.ncbi.nlm.nih.gov/pubmed/18777991>,

2. Family-Based Early Intervention Programs Developed in Turkey

Behavioral Education Program for Children with Autism (BEPCA)

This program aimed at teaching basic imitation and basic matching skills to children with autism. The target audience of the program was children with autism. It was implemented for 26 weeks in the 2006-2007 academic year. BEPCA implementation team consisted of two educators and one expert specialized in autism, applied behavior analysis, and intensive behavioral education. The program included 1 family and 1 child. Prior to the implementation, Behavioral Education Program for Children with Autism Follow-Up Tool (BEPCA-FUT) was administered. The tool was re-administered 6 months later. In this way, the progress of the child was followed. The Leiter International Performance Scale was employed for determining the intelligence level of the child. The program was implemented five days a week, and 6 hours a day. The program was evaluated via observations, follow-up meetings, interviews, process products, and performance evaluation reports. A continuous improvement occurred in the imitation and matching skills of the child in the implementation process lasting 6 months. Apart from that, some non-target effects such as increase in communication starting attempts, beginning to fulfill some instructions, starting to play with some toys appropriately, and beginning to direct one's attention to people and objects around were observed (Güleç- Aslan, Kırcaali-İftar, Uzuner, 2009).

Interaction-Based Early Childhood Intervention Program (IBECIP)

It was the Turkish adaptation of Responsive Teaching. It lasted 6 months. The implementer conducted activities with mothers and their children for 1 to 2 hours a week.

The goal of the program was to enhance the quality of interactions between primary caregiver and children, and support children. The target audience of the program was children in the 0 to 6 age group with Down syndrome, autism, cerebral palsy, mental deficiency, retarded language and speech, developmental retardation with an unknown cause, and premature birth, and their mothers. 19 mother-child pairs participated in the program implemented by a special education specialist between 2009 and 2010. The assessment tools used in the study were the Turkish version of The Maternal Behavior Rating Scale, The Child Behavior Rating Scale, Denver-II, Ankara Developmental Screening Inventory, and semi-structured mother interviews. The specialist prepared daily plans to be applied to mothers and children. The guide contained 66 strategies that could be used by mothers during their interactions with their children and 132 discussion points supporting such strategies. Each plan included 1 to 2 strategies and discussion points belonging to them. In each session, the plan was explained to the related mother. During the implementation of the plan, the researcher demonstrated activities that could set an example for the related mother. It was observed that an increase occurred in mother-child interactions; the mothers were informed of the development of their children; and an increase took place in the self-care and game skills of the children (Karaaslan, 2010; <http://www.etecom.org/aboutus.asp>).

The Parent-Child Interaction Intervention for Children with Visual Impairments

The target audience of The Parent-Child Interaction Intervention for Children with Visual Impairments was children with visual disability and their mothers. The program aimed at increasing the quality and quantity of the interaction between children with a visual disability and their mothers. It was implemented by a special education specialist between 2009 and 2011, and lasted 34 months. The program included two visually challenged children and their mothers. When the intervention began, one of these children was 16 months old and blind, and the other was 29 months old and had a low vision. A total of 27 intervention program sessions were conducted with the mothers (20 with the first mother, and 7 with the second mother). Observation, interview, journal, interaction check list, document, video recording, and tape recording were used as assessment instruments. The program was observed to have the following effects on mother-child pairs:

- An increase occurred in the parenting skills of the mothers.
- The mother started to watch the reactions of their children closely, guide their children, provided more stimuli and language inputs for their children, and increased physical contact.
- The mothers started to enjoy communicating with their children.
- An increase occurred in the interaction of the children with their mothers.
- The children started to establish communication with other individuals (Kesiktaş, 2012).

Discussion

It was determined that most of the early intervention programs developed between 2004 and 2013 were implemented in 2007. 6 of the programs were implemented in 2007; 3 programs were implemented in 2005; 3 programs were implemented in 2009; 1 program was implemented in 2004; and 1 program was implemented in 2006. The present study did not detect any early intervention program developed in 2008, 2010, 2011, 2012, and 2013.

7 (50%) of the early intervention programs developed in the last decade were for children with special needs and their families.

4 of the programs (29%) were aimed at improving parenting skills.

2 of the programs (14%) were family-based and about obesity, which is a problem frequently encountered in developed and developing world countries (%14).

1 of the programs (%7) was about alcohol use and HIV, which are two big problems of developed countries.

Generally speaking, the family-based early intervention programs provided families and children with social, emotional, economic, educational, and physical benefits. Through the programs implemented, family-child interactions increased; the children became more self-sufficient; the children had higher self-respect levels; the parents became more self-confident; the parents started to enjoy interacting with their children; economic benefits were gained; an improvement occurred in the cognitive and receptive/expressive language skills of the children; an increase occurred in their self-regulation skills; radical changes were observed in eating and physical activity habits of the families and children; an awareness was raised regarding alcohol use and diseases such as HIV and AIDS; and the children's skills of communicating with people outside the family improved.

Finally, the comparison between Turkey and the USA demonstrated that the family-based early intervention programs implemented in Turkey were inadequate in terms of quantity and scope. It was concluded that the programs implemented in Turkey were mostly aimed at children needing special education and their families; and that programs should be developed in regard to alcohol use, parenting skills, premature infants, and the homeless.

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A comparison of IRT-based methods for examining differential item functioning in TIMSS 2011 mathematics subtest

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Abstract

The purpose of this study is to determine items which have differential item functioning (DIF) in TIMSS 2011 mathematics subtest with three different item response theory (IRT)-based DIF methods and compare results of these methods. For this purpose, DIF values obtained by Lord's Chi-Square, Raju's Area and Likelihood-Ratio Test methods were compared with respect to gender (males were the reference group while females were the focal group) to test whether these procedures yielded similar results. In addition, item purification was performed for each methods and results were compared in order to determine the effect of item purification. These comparisons can provide evidence for determining the best models for detecting DIF items. Results indicated that 2PL IRT model fitted best to the data for both Lord's Chi-Square method and Raju's Signed Area method. Although number of items detected as DIF differed for each methods, 2 out of 22 dichotomous items in the test observed consistently across all methods, which were more likely to be answered correctly by males after controlling for overall ability.

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Peer-review under responsibility of the Sakarya University.

Keywords: Item Response Theory, Differential Item Functioning, TIMSS

1. Introduction

International assessments such as the Third International Mathematics and Science Study (TIMSS) reveal students' achievement level in science and mathematics and also to get information about the effectiveness of the present school curricula in participating countries (Keser, 2005; Uzun, Butuner & Yigit, 2010). However, some of the result of TMSS could be biased with respect to students' achievement and effectiveness of the education system of participating countries. One of the main reason behind these unexpected results is that items in the test may function differently with respect to gender and cultural differences.

A widely accepted definition of differential item functioning (DIF) was that an item is identified as DIF if examinees of equal ability, but from different subgroups do not have an equal probability of correctly responding to that item (Hambleton & Rogers, 1989). If the discrepancy in item performance between the subgroups of interest is equal across the entire range of abilities then the DIF is said to be "uniform". However, if the difference between the subgroups is not consistent across the entire range of abilities then the DIF is said to be "non-uniform" (Hambleton, Clauser, Mazor & Jones, 1993)

DIF items can lead to biased measurement of ability because the measurement is affected by so-called *nuisance factors* (Ackerman, 1992). It is important to clarify one concept which has been used previously instead of DIF but now has another meaning; item bias (Scheuneman & Bleistein, 1997). A biased item displays DIF; however that is not sufficient for the item being biased. DIF is a statistical property of an item while item bias is more general and lies in the interpretation (Camilli & Shepard, 1994; Clauser & Mazor, 1998; Wilberg, 2007). An observed difference does not mean that there exists measurement bias since it might be a real difference in ability (Camilli, 2006). Item impact refers to when test takers from different groups have different probabilities of responding correctly to an item due to true differences in ability measured by the item (Dorans & Holland, 1993; Wilberg, 2007).

There are different methods which aim to determine DIF items and degree of DIF. The reasons for the differences in findings were posited to be due to the use of different criteria for identifying and flagging DIF, for example, measures of magnitude versus statistical significance (Borsboom, 2006; Hambleton, 2006; Millsap, 2006).

DIF methods are generally classified in to two groups, those methods based on item response theory (IRT) and those not based on IRT. For the IRT-based methods, the estimation of an IRT model is required, and a statistical testing procedure is followed, based on the asymptotic properties of statistics derived from the estimation results. For the latter, the detection of DIF items is usually based on statistical methods for categorical data, with the total test score as a matching criterion (Magis et al., 2010). In some research, IRT-based and Non-IRT-based methods are called as *parametric DIF methods* and *nonparametric*, respectively.

For dichotomously scored items, the usual IRT models are the logistic models with one, two, or three parameters. It was further denoted by 1PL, 2PL, and 3PL models, respectively. The 3PL model can be written as:

$$p(xi = 1 | \theta_n) = c_i + (1 - c_i) \frac{\exp[a_i(\theta_n - b_i)]}{1 + \exp[a_i(\theta_n - b_i)]} \quad (1)$$

where xi is the binary response of subject n to item i ; θ_n is the ability of subject n ; and a_i , b_i , and c_i are, respectively, the discrimination, difficulty, and pseudo-guessing parameters of item i . The 2PL model can be obtained from Equation 1 by fixing c_i to 0; the 1PL model can be obtained by additionally fixing a_i to 1. In this study, results of IRT-based DIF detection methods were compared and the 2PL IRT method was used to estimate ability and item parameters.

1.1 IRT-based DIF methods.

The basic idea of LRT is that item parameters should be invariant across different subgroups. In order to test item parameter invariance, likelihood of a compact model in which the parameters are constrained to be the same and an augmented model in which all variables of interest are allowed to vary between the subgroups are compared. The significance of this comparison is tested by means of the usual likelihood ratio test. Based on the selected IRT model, not only the item difficulties (1PL model), but also discriminations (2PL model), and pseudo-guessing parameters (3PL model) are allowed vary between the groups. The main idea is to compare the likelihood of two models and choose the model which has the largest likelihood. The LRT test statistic is defined as

$$G^2 = -2 \ln \frac{L(\text{model } a)}{L(\text{model } b)} = -2 [1(c) - 1(a)] \sim \chi^2_{(m)} \quad (2)$$

where m is the difference in number of parameters between the augmented and the compact model.

The second IRT-based DIF method is called **Lord's chi-square test** (Lord, 1980) and is based upon the null hypothesis of equal item parameters in both subgroups and a statistic with a chi-square distribution under the null hypothesis (Magis, 2010). Although three different item response models (1PL, 2PL, 3PL) can be fitted, before the analysis item parameters must be scaled with a common metric prior to statistical testing.. The Q_j statistic is defined as;

$$Q_j = (v_{jR} - v_{jF})' (\sum jR - \sum jF)^{-1} (v_{jR} - v_{jF}) \quad (3)$$

where $V_{jR} = (a_{jR}, b_{jR}, c_{jR})$ and $V_{jF} = (a_{jF}, b_{jF}, c_{jF})$ are the vectors of item discrimination, difficulty, and pseudo-guessing estimates of item j in the reference group and focal group, respectively, and $\sum jR$ and $\sum jF$ are the corresponding variance-covariance matrices.

The third IRT-based DIF method is called the *Raju's Signed Area* method (Raju, 1988, 1990). In this method, the (signed) area between the item characteristic curves for the focal group and the reference group is computed and the corresponding Z statistic is based on the null hypothesis that the true area is zero. A common metric is required prior to the test. Any item response model can be considered with Raju's (1988) approach

(Magis,2010).However, in this model the pseudo-guessing parameters for both groups of subjects are constrained to be equal. Z statistic for 1PL model is simply given as follows:

$$Z = \frac{b_{jR} - b_{jF}}{\sqrt{\sigma_{jR}^2 - \sigma_{jF}^2}}$$

(4)

For 2PL and 3PL models, the formula for Z is much more complex and can be found in Raju (1990) (Magis et al, 2010).

1.2 Item purification

Item purification is based on iterative elimination of DIF items which prevent the inflation of Type-I error rate and increase the accuracy of the results. Especially, Type-I error inflates when DIF items are taken into account during the computation. As a result, more non-DIF items are incorrectly flagged as DIF (Clauser, Mazor, & Hambleton, 1993). Item purification iteratively removes the items currently flagged as DIF from the test scores to get purified sets of items, unaffected by DIF. With IRT based methods, item purification acts rather when item parameters in both groups of respondents are being rescaled, usually onto the reference group scale. At each step of the purification process, rescaling is made by removing all items currently flagged as DIF ((Magis and Fagon, 2013).

Item purification procedures are useful and powerful when there are only a few DIF items in the test. However, in the case of having to many DIF items in the tests, unwanted DIF items effect on non-DIF items may not be completely eliminated by item purification procedures.

2. Purpose

The purpose of this study is to determine items which functions differently with respect to gender of students in TIMSS 2011 mathematics subtest by three different item response theory (IRT)-based DIF methods and compare results of these methods. 2PL IRT method was used to estimate both ability and item parameters.

It is assumed that these three IRT-based techniques would show substantial agreement in the detection of DIF among the same set of mathematics subtest items, but vary in the number of items flagged with DIF due to different assumptions and criteria used.

3. Method

Real data from TIMSS 2011 mathematics subtest booklet 2, which was administered to 488 8th grade students (251 male and 237 female students), was used to evaluated three different DIF detecting methods. DIF values obtained by Lord's Chi-Square, Raju's Area and Likelihood-Ratio Test methods were compared with respect to gender, where males were the reference group and females were the focal group, to test whether these procedures yielded similar results. In addition, item purification was performed for each methods and results were compared in order to determine the effect of item purification on each methods. "difR" package in R software was used to conduct analysis for each methods.

4. Findings

Some required assumptions of methods have to be checked before conducting the analysis such as assumptions of IRT models. An underlying assumption of many IRT models is that the items within a scale are unidimensional, i.e., that a single underlying trait exclusively determines the probability of item responses (Embretson & Reise, 2000). While there are a number of different assumptions, methods, and software available to assess for dimensionality, such as assessing the fit of the data within Rasch models (Glas & Verhelst, 1995; Rasch, 1960; Rizopoulos, 2006; Yang et al., 2011).

For this study, factor 9.2 (Lorezo-Seva & Ferrando, 2013) was used to conduct factor analysis since it uses tetrachoric correlation. These analyses were performed combining the male and female groups, as well as separately to establish dimensional factorial invariance. This assumption can be approximated by assessing the

ratio of first to second eigenvalues, which is an index of the strength of the first dimension of the data (Reise & Waller, 1990). This means that when the first factor explains a large proportion of the total variance, then assumption of unidimensionality has been met.

Table 1. Exploratory factor analysis (EFA) results of subgroups

	Factors	Eigenvalue	Proportion of variance (%)	Cumulative Proportion of variance
Groups	1	6.994	31.79	31.79
	2	1.397	6.35	38.15
	3	1.119	5.09	43.24
male	1	7.068	32.13	32.13
	2	1.448	6.58	38.71
	3	1.319	5.99	44.71
female	1	6.994	31.79	31.79
	2	1.446	6.57	38.37
	3	1.204	5.48	43.84

First three eigenvalues for each groups were given in Table 1. Ratios of first eigenvalues to the second ones indicated that unidimensionality assumption was satisfied for mathematics subtest and for each groups.

Local independence means that after conditioning on ability, examinees' responses to the items on the test are likely to be independent (Hambleton et al, 1991). In general, when the unidimensionality is met, assumption of local independence is said to be met. On the other hand, even assumption of unidimensionality is met, local independence can not be satisfied (Lord, 1980).

Table 2: Results of three different IRT-based DIF methods with item purification

Item	Lord's Chi-square		Lord's Chi-square with Purification		Raju's method		Area		Raju's Area method With purification		LRT method With purification	
	Stat.	P-value	Stat.	P-value	Stat.	P-value	Stat.	P-value	Stat.	P-value	Stat.	P-value
m1	0.617	0.734	0.454	0.796	-0.119	0.904	0.156	0.875	0.199	0.655	0.259	0.610
m2	7.572	0.022 *	7.913	0.019 *	2.178	0.029 *	3.048	0.002**	4.466	0.034 *	4.466	0.034 *
m3	1.262	0.532	1.355	0.507	1.085	0.278	1.921	0.054	0.690	0.405	0.836	0.360
m4	5.730	0.057	6.139	0.046 *	1.651	0.098	2.901	0.004 **	0.179	0.671	0.149	0.699
m5	0.325	0.849	0.555	0.757	-0.351	0.725	-1.795	0.072	1.067	0.301	1.173	0.278
m6	2.084	0.352	2.476	0.289	0.048	0.961	0.218	0.827	0.122	0.726	0.169	0.680
m7	6.068	0.048 *	6.816	0.033 *	-1.305	0.191	-0.696	0.485	2.817	0.093	2.616	0.105
m8	8.602	0.013 *	9.685	0.007 **	-2.449	0.014*	-3.134	0.001 **	3.170	0.075	3.042	0.081
m9	0.489	0.782	0.635	0.727	0.345	0.730	0.960	0.336	0.153	0.695	0.217	0.640
m10	0.574	0.750	0.641	0.725	-0.748	0.454	0.683	0.494	0.613	0.433	0.505	0.477
m11	3.067	0.215	3.575	0.167	-0.448	0.653	-0.445	0.655	0.012	0.910	-0.012	1.000
m12	11.09	0.003 **	11.25	0.003 **	2.547	0.011 *	3.621	0.00 ***	6.243	0.012 *	6.243	0.012 *
m13	3.551	0.169	3.946	0.139	1.881	0.059	4.432	0.00***	0.179	0.671	0.223	0.636

m14	6.386	0.041 *	6.912	0.031 *	-0.475	0.634	1.119	0.263	2.394	0.121	2.219	0.136
m15	0.165	0.920	0.334	0.846	-0.084	0.932	-0.250	0.802	0.671	0.412	0.778	0.377
m16	7.587	0.022 *	8.023	0.018 *	2.125	0.033 *	3.089	0.002**	2.004	0.156	2.247	0.133
m17	0.770	0.680	1.005	0.604	0.345	0.729	1.269	0.204	0.148	0.699	0.221	0.638
m18	3.118	0.210	3.605	0.164	0.107	0.914	1.397	0.162	0.176	0.674	0.123	0.725
m19	2.121	0.346	2.313	0.314	-1.216	0.223	-0.802	0.422	11.80	0.0***	11.80	0.00***
m20	0.099	0.951	0.056	0.972	0.310	0.756	-0.474	0.635	0.339	0.560	0.418	0.517
m21	1.240	0.537	1.688	0.429	-1.086	0.277	-2.313	0.02 *	-0.022	1.000	-0.03	1.000
m22	3.286	0.193	3.920	0.140	-1.407	0.159	-1.709	0.0874	0.882	0.347	0.800	0.371

Sig. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Table 2 shows the DIF statistic and p significance values obtained by Lord's Chi-Square, Raju's Area and Likelihood-Ratio Test methods. In addition, item purification was performed for each methods with 50 iteration and results of each methods with item purification was reported in table 2. In addition, significance level was set to 0.05 for each methods.

First, Lord's Chi-Square method without item purification was used in order to determine DIF items in TIMSS 2011 mathematics subtest booklet 2 and results were reported in table 2. Lord's Chi-Square method results indicates that m2, m7, m8, m12, m14 and m16 items were identified as DIF items and the other 16 items were not detected as DIF items. The fourth column shows the Lord's Chi-Square statistic values obtained in the last step of the purification process, when DIF items are discarded from the computation of sum scores. The corresponding *p* values are also displayed, and the significance levels are indicated with one or more asterisks. This indicates that all items flagged as DIF on the basis of the significance test can be considered to be largely affected by DIF.

Item purification was also performed for Lord's Chi-Square method with purification results indicate that m2, m4, m7, m8, m12, m14 and m16 were detected as functioning differently after 50 iterations and 15 out of 22 items were not detected as DIF. When compared the results of Lord's Chi-Square method with item purification, 6 items detected as DIF were identical and only m4 appeared to show DIF with purification method. They can also be found in table 2 as items with at least one asterisk.

Second, Raju's Area method without item purification was used in order to determine DIF items in TIMSS 2011 mathematics subtest booklet 2 and results were reported in table 2. Raju's Area method results indicates that m2, m8, m12, and m16 items were identified as DIF items and the other 18 items were not detected as DIF items. Item purification was also performed for Raju's Area method and results indicate that m2, m4, m8, m12, m13, m16 and m21 were always classified as DIF items after 50 iterations and 15 out of 22 items were not detected as DIF. When compared the results of Raju's Area method with item purification and without item purification, 4 items detected as DIF were identical and only m4, m13 and m21 appeared to show DIF with purification method.

As third method, Likelihood-Ratio Test (LRT) without item purification was used in order to determine DIF items in TIMSS 2011 mathematics subtest booklet 2 and results were reported in table 2. LRT method results indicates that m2, m12, and m19 items were identified as DIF items and the other 19 items were not detected as DIF items. Item purification was also performed for LRT method and results indicate that m2, m12, and m19 were always classified as DIF items after 50 iterations and 19 out of 22 items were not detected as DIF. When compared the results of LRT method without item purification and with item purification, all three items detected as DIF were identical. Compared to other methods, LRT seems to fail detecting DIF items.

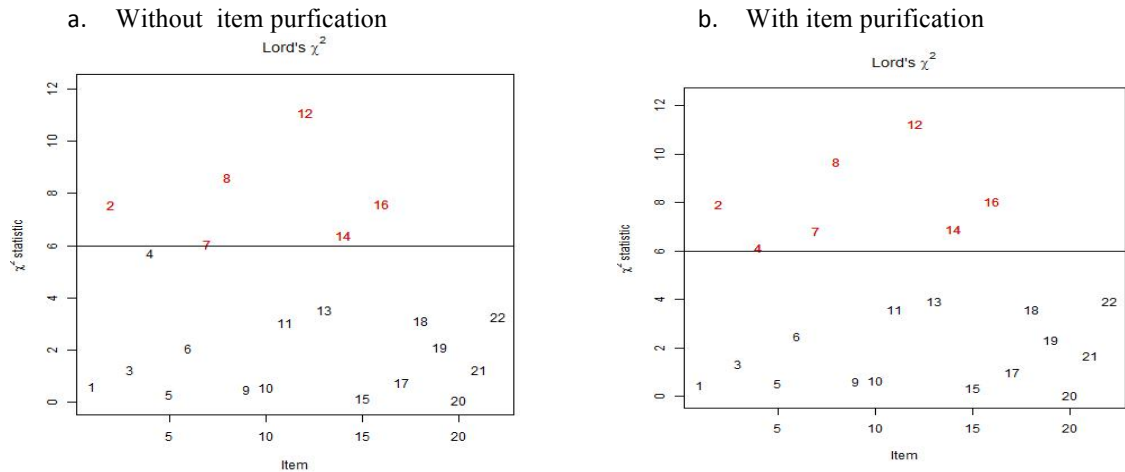


Figure 1. Lord's Chi-Square statistics and detection threshold with the mathematics data set.

Items are represented by integers referring to their rank in the output list of Figure 1 (1 for the *m1* item, etc.). Both Lord's Chi-Square statistics (Detection threshold: 5.9915, p : 0.05) without item purification and with item purification were presented in Figure 1a and Figure 1b, respectively. Items *m2*, *m7*, *m8*, *m12*, *m14* and *m16* were detected as DIF items without item purification. With item purification item *m4* was also detected to be DIF item. It can be seen from the table that Item *m7* is borderline for DIF without item purification, while item 4 is borderline with item purification method. The obtained positive effect size values mean that men are more inclined than women to actually mathematics independent of their degree of inclination to the other lessons in TIMSS 2011.

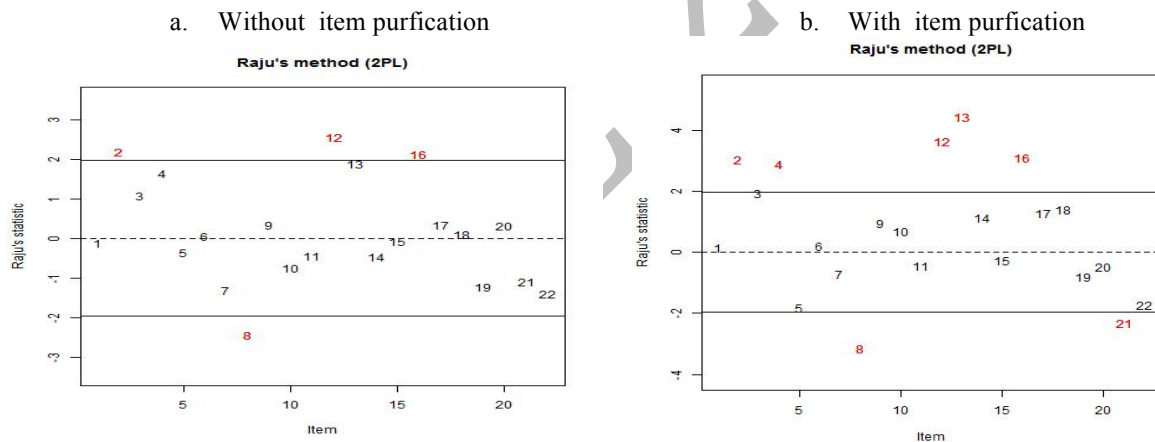


Figure 2. Raju's Area statistics and detection threshold with the mathematics data set

Raju's z statistics based on signed area (Detection thresholds: -1.96 and 1.96, p : 0.05) without item purification and with item purification were presented in Figure 2a and Figure 2b, respectively. Items *m2*, *m4*, *m7*, *m8*, *m12*, *m14* and *m16* were detected as DIF items. With item purification item *m13* and *m21* was also detected to be DIF items while item *m7* and *m14* were not functioned differently. The obtained negativ effect size values for item 8 and item 21 mean that unlike other items, these two items were in favor of women rather than men independent of their degree of inclination to the other lessons in TIMSS 2011.

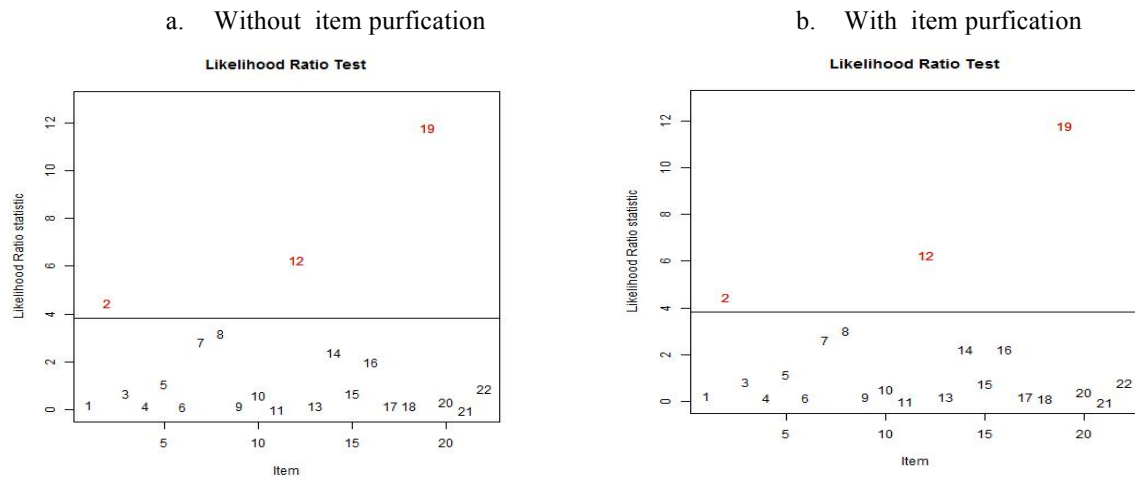


Figure 3. LRT statistics and detection threshold with the mathematics data set.

Likelihood Ratio statistics (detection threshold: 3.842, p : 0.05) without item purification and with item purification were presented in Figure 3a and Figure 3b, respectively. With LRT method, items m2, m12 and m19 were detected as DIF items. When compared the results of LRT method without item purification and with item purification, all three items detected as DIF were identical. The obtained positive effect size values mean that men are more inclined than women to actually mathematics independent of their degree of inclination to the other lessons in TIMSS 2011.

Table 4: Items Detected As DIF with Three Different IRT-Based Methods

Lord's Chi-square		Raju's Area method		LRT method	
With item purification	Without item purification	With item purification	Without item purification	With item purification	Without item purification
m2	m2	m2	m2	m2	m2
m7	m4	m8	m4	m12	m12
m8	m7	m12	m8	m19	m19
m12	m8	m16	m12		
m14	m12		m13		
m16	m14		m16		
	m16		m21		

Table 4 shows the items detected as DIF by three different IRT-based methods with item purification and without item purification. As can be seen from the table 4, performing item purification tended to increase the number of DIF items except for LRT methods.

5. Results and Discussion

In this study, three different IRT-based DIF methods were used to determine items which functions differently with respect to gender of students in TIMSS 2011 mathematics subtest and results were compared. In addition, item purification was performed for each method in order to see how item purification effected the number of DIF items and DIF statistics compare results of these methods.

Comparing findings from different methods can provide insights into whether differences are due to the different assumptions and criteria embedded within the methods. Moreover, convergent findings across methods are more likely to prompt content experts to modify or remove items with consistent DIF of high magnitude (Yang et al., 2011).

Results indicated that two items (m2, m12) were identified as DIF items by all three methods, whereas 12 other items were never identified as such. For four items (m2, m8, m12 and m16), the Lord's Chi-square and

Raju's Area methods identified them as DIF, but the other methods did not. On the other hand, m19 item was detected as DIF item by only LRT methods.

Although, almost all items detected as DIF with three different methods were in favor of male students, Raju's signed area method with item purification indicated that item 8 and item 21 were in favor of female students rather than male students with respect to mathematics subject.

Performing item purification with Lord's Chi-square and Raju's Area methods effected both the number of DIF items and DIF items themselves. However, Performing item purification with LRT method did not affect the number of items detected as DIF.

According to the results, Lord's Chi-square method tended to be more sensitive than other two methods with respect to detecting DIF items. On the other hand, even item purification was performed, LRT method failed to detect many items detected as DIF items by other methods. As it is assumed, these three IRT-based techniques showed substantial agreement in the detection of DIF among the same set of mathematics subtest items, but vary in the number of items flagged with DIF due to different assumptions and criteria used.

This has been a theoretical review of possible IRT-based DIF methods that can be used with a dichotomously scored large scale mathematics test. Although, number of items that displayed DIF differed because of different criteria being used by different methods, it is also important to examine the item carefully in order to try to explain why the item displays DIF.

Finally, Results indicate that there is no single method can be guaranteed to identify all of the DIF items in a test. Not only IRT-based methods but also Non-IRT-based methods should be used to address the instability problem which undermines the utility of current methods and results of both IRT-based and Non-IRT-based methods can be compared in order to determine the best method that detect DIF items accurately.

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INTE 2014

A comparison of the alexithymia, self-compassion and humour characteristics of the parents with mentally disabled and autistic children

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Abstract

In this research study, the scores of parents with mentally disabled and autistic children in the alexithymia, self-compassion and humour styles scales are compared and their scores are investigated focusing on the diagnosis of their children variable. Based on the relational screening model, this research study involves 120 mothers and fathers having children diagnosed with alexithymia and autism. As a result of the study, it was found that the comparison of the fathers-mothers' total scores in the alexithymia, self-compassion and humour styles scales and their sub-scale scores revealed that the only difference is in the over-identification sub-dimension of the self-compassion scale; moreover, regarding the question whether the scale scores vary depending on the variable of the diagnosis of their children, it was found that there is no statistically significant difference in the scale scores considering this variable.

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Peer-review under responsibility of the Sakarya University.

Keywords: Mentally disabled, autistic children, alexithymia, self-compassion, humour characteristics, parents

Introduction

Children start to interact with their parents the moment they are born and gain the first life experiences from their parents who have a vital role in their children's behaviors. The initial interaction between the parents and children influence the way they establish relationships in their future years, and the experiences provided by the parents pave the way for the children's communication skills. During the mutual interaction between the children and the parents, it becomes a reality that that mothers and fathers have an influence on their children's behavioral patterns and their personality traits. This is also true for the relationship between mentally disabled and autistic children and their parents; in other words, parental characteristics affect the way these parents communicate with their children as well.

Studies carried out in the field of personality development put forth the idea that the genetic factors, initial experiences in the family and the events encountered in life are all responsible for the development of the personality (Tezel Şahin, 2005). When it comes to the mentally disabled and autistic children, in addition to the characteristics associated with the diagnosis of these children; the communication parents have with them, how parents set a model for them, to what extent and how they respond to their children's behaviors have an effect on the development of their children's behavior. On the other hand, parents are under the influence of their children's certain behaviors, especially because of their children's disability. In brief, this is a reciprocal process in that while the characteristics of the parents affect their children's behavior, the disability level of the children may cause different influences on the parents.

The responsibility for looking after the mentally disabled children generally belongs to the mother in all cultures. The psychological adaptation of the mothers with mentally disabled children is lower than fathers as well as the mothers having children with no disabilities. It was found that although the demands of mentally disabled children for care are higher, fathers of such children involve in the process of looking after and educating their children less than the fathers and mothers of children with no disabilities (Kaner, 2009). The findings of many studies focusing on the families with mentally disabled children can be summarized as follows: families

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experience the feeling of social isolation (Kearney and Griffin 2001), mothers do not allocate enough time for themselves because of spending too much time for the care of their children (Sarı et al., 2006), they experience emotional exhaustion more than other mothers having children with no mental disabilities (Duygun, 2001), their anxiety levels are always high, (Coşkun and Akkaş, 2009) and the levels of their depression are also high (Bahar et al., 2009; Albaş, 1999). Some other studies revealed the following results: parents with autistic children are more passive in social communication (Whitehouse, Coon, Miller, Slisbury and Bishop, 2010), their mutual social interaction deteriorates, they have lack of concentration on the topics during conversations, their personality turns out to be cold, rigid and aloof and they have difficulty and constraints when it comes to adapting to the changes (Gerds and Bernier, 2011, Bishop et.al., 2004, Hurley et.al., 2007). As for individuals with autistic disorders, it would be true to state that there is a fundamental problem with their feelings. They are unable and indifferent to the understanding and interpretation of others' feelings and they have difficulty in expression their own feelings. (Korkmaz, 2000; 2010, Robledo and Ham-kucharski, 2005, Fazlıoğlu and Yurdakul, 2009, Zager, et.al., 2012). As they are rarely or never able to understand others' feelings, they have a block when it comes to sharing their happiness or sadness (Wing, 2012). They also have difficulty in interpreting people's facial expressions or their emotion in their voices (Baron-Cohen, 2008). Moreover, they cannot see the clues embedded in the emotional expressions (Bernier and Gerds, 2010). Taking all these characteristics into consideration, one can remember the characteristics of the alexithymia which is another communication problem. Alexithymia is a term used to refer to the characteristics of individuals who do not seem to be able to understand their feelings and to those who have lack of words to describe these feelings (Szatmari et.al.,2008). It can also be described as a cognitive-affective communication disorder experienced by children and the adult (Way, Yelsma, Van Meter and Black-Pond, 2007). The frequency of alexithymia is 5,3% for females while it is 9,4% for males (Joukamaa, et. al., 2003). When compared to the general population and the parents having children with other developmental disorders, parents with autistic children have alexithymia more frequently (Szatmari, et. al.,2008). In another research study whose participants were parents with autistic children, it was found that 56,8% of the mothers with autistic children have alexithymic characteristics while the percentage of fathers with such characteristics is 60,4 (Saraç, 2013). Some other researchers maintain that alexithymia might result from genetic factors, physical or psychological diseases, traumatic experiences, advanced depression and anxiety or stress (Lesser, 1981, Way, et.al., 2007, Thompson, 2009). It was also pointed out that parents with autistic children experience more stress and depression than the parents having children with other developmental problems (Bailey, Phillips and Rutter, 1996), and thus, it is likely that the hardships arising from autism justify why parents with autistic children have alexithymia more frequently. However, De Sousa (2010) asserts that the alexithymia scores of the mothers with mentally disabled children are higher than mothers with autistic children; in addition, while alexithymia is regarded as a personality trait independent from the daily stress-generating situations, it affects the response given to such situations. Bratis, et al. (2009), on the other hand, state that individuals experiencing feelings such as emotional exhaustion, depersonalization and those without sufficient family support and with a low sense of personal accomplishment have alexithymic characteristics more. At this point, the issue of self-compassion is considered to be one of the characteristics enabling parents with mentally disabled and autistic children to deal with the problems resulting from the disability of their children and to feel good about themselves. It is likely that individuals with high levels of self-compassion are in an advantageous position than those with low levels of self-compassion in terms of psychological health because self-compassion enables people not to exaggerate their feelings of pain and error, not to criticize themselves too harshly to harm themselves and not to have the feeling of isolation (Wood, Saltzberg, Neale and Stone, 1990). Besides, individuals with high levels of self-compassion do not over-identify themselves with their feelings and thoughts (Nolen-Hoeksema, 1991). It is also likely that that because females tend to be more empathetic than males (Eisenberg and Lennon, 1983), they have higher levels of self-compassion than males. Conversely, some research studies exploring the relationship between self-compassion and gender (Raes, 2010, Kirkpatrick, 2005; Neff, Hsieh, Dejjterat, 2005; Neff 2003a; Neff and Vonk, 2009) showed that females are slightly less self-compassionate than males. Self-compassion encourages people to be able to intact with themselves, to develop empathy, to be sympathetic and sensitive and to be tolerant of the problems (Gilbert and Procter, 2006); thus, it can be argued that higher levels of self-compassion are related to their psychological well-being (Neff, 2009), and self-compassion can be regarded as an important means of coping with negative life experiences (Allen and Leary, 2010). On the other hand, humour is another way of overcoming problems individuals encounter in their daily lives. Humour not only paves the way for the development of interpersonal relationships but also helps individuals to express stress in a reasonable way and to reduce the tension in general (Semrud-Clikeman and Glass, 2010). It also makes people approach problems optimistically and positively (Chinery, 2007). Being a social construct that has to be shared (Hoicka and Akhtar, 2012), humour can be used as a means of self-acceptance and developing hearty relationships with other people (Martin, Puhlik- Doris, Larsen, Gray and Weir, 2003). It would be fair to state that parents who can approach their mentally disabled and autistic children with self-compassion and express their experiences in a humorous way can interact with their children more effectively and cope with their problems. The relationship between the

mother-father and the child is a mutually nourishing relationship. Starting from the babyhood, parents try to communicate with their children using gestures-mimics, coquetry and verbal expressions. On one hand, parents with children passing through normal developmental processes are responded by their children in case of any endeavours to create the communication, and thus parents try new ways of communication as a means of strengthening the bond between their children and themselves. On the other hand, because the communication attempts of parents with autistic children are refused and not responded by their children, they might be unwilling to communicate with their children. As for mentally disabled children, it would be true to state that on account of the delay and the inadequacies in their language development, they have difficulties in communicating with their parents. It might sometimes be some parental characteristics that may cause the inability of parents to successfully communicate with their children. The communication may also vary depending on the father and the mother. Especially in our society, mothers take up the main role to look after their children, which results in the perception of mothers as the caregivers. Thus, more communication opportunities are existent between the child and the mother while the father tends to spend fun time with their children rather than looking after them. In brief, the general characteristics of father and mothers, their abilities to be able to respond to what is expected from them and the gender-specific characteristics all have an influence on the way they communicate with their children. According to Baron-Cohen (2008), while the female brain surpasses the male brain in terms of the understanding of the feelings and empathy, the male brain overturns the female brain when it comes to systematic thinking. This condition might lead us to think that fathers and mothers have different ways of communicating with their children. Furthermore, it could be argued that whether parents have mentally disabled and autistic children also has an effect on their behavioral patterns. In some studies, it was found that the parents with autistic children have higher level of broad autism phenotype characteristics than the parents with normally developing children in the areas of social skills and communication (Bishop et al., 2004, Köse et al., 2013). It was also suggested that mild disorders in social communication especially affect the males (Skuse, Bruce, Dowdney and Mrazek, 2011). Taking all these findings into account, it would be true to point out that fathers and mothers with mentally disabled and autistic children have different characteristics and these differences arise from the genders of the parents and what their children were diagnosed with. Now that the alexithymia, self-compassion and humour styles of mothers and fathers with mentally disabled and autistic children affect their communication with their children, the comparison of fathers and mothers depending on these characteristics makes up the main focus of the current study. This study aims to compare the alexithymia, self-compassion and humour styles scores of fathers and mothers with mentally disabled and autistic children, and the results are investigated depending on the diagnosis of their children variable.

2. Method

- 2.1 Research Design: In this study, the relational screening model was used to compare the scores obtained from fathers and mothers with autistic children in the Humour Styles Scale, Self-compassion Scale, and the Toronto Alexithymia Scale. Therefore, depending on the type and distribution of data, the Student t test was applied. Whereas, the correlation model was used as a relational screening model to explore the relationship between the diagnosis of the child and the scores of mothers and fathers. For this, the variance analysis was chosen.
- 2.2 Sample: The sample of the study includes 14 rehabilitation centres chosen among different rehabilitation centres in the Istanbul province by means of convenience sampling and 120 children with special needs and their parents. According to Ross (2005), convenience sampling is a sampling method in which the groups to be involved in the sample of the study are determined on the basis of suitability or accessibility for the researcher. Among the children in the sample of the study, 76 (63.3%) were diagnosed with autism and 38 (31.7%) were diagnosed with mental disability. While 32 (26.7%) of them were female, 86 (71.7%) were male. On the other hand, 34 (34.7%) of them were between the ages of 0-6, 61 (50.8%) of them ranged from 6 to 12. Also, 24 (20%) of them were between the ages of 12-18. As far as the characteristics of the parents are concerned, 57 (57%) of the mothers and 36 (30.2%) of the fathers were under the age of 35. Also, 61 (49.6%) of the mothers and 46 (38.9%) of the fathers were graduates of primary schools while the remaining graduated from high-school and university. Finally, 93 (80.9%) of the mothers were housewives while 44 (39.6%) of the fathers were self-employed.
- 2.3 Data analysis: Student t test was applied because the numeric variables found as a result of the analysis of the comparison of variables between the father and the mother were found to show normal distribution patterns at acceptable levels. The effects of dichotomous independent variables on the total scores of the scales treated as numeric variables were investigated by means of two way analysis of variance. Whether there is interaction between independent variables was explored, and this was done using the simple main effects of the sub-groups of child gender and the diagnosis. All the analysis was done using the licensed SPSS 21.0. Significance of $p < 0.05$ was used as the threshold.

2.4 Data Collection Instruments:

2.4.1. Self-compassion Scale: Created by Neff (2003), the Self-compassion Scale assesses the qualities related to the sub-dimension of self-compassion and is a self-assessment instrument based on the individual's providing information about his/her own self (Soyer, 2010). Containing 26 items, the Self-compassion Scale was found to have 6 sub-dimensions making up the concept of self-compassion as a result of the confirmatory factor analysis: self-judgment against self-kindness, isolation against common humanity and over-identification against mindfulness. The adaptation of the Self-compassion Scale, the reliability and the validity of the study were done by Akin, Akin and Abacı in 2007. 633 students at the Education Faculty of Sakarya University participated in their study. Firstly, the linguistic equivalence of the scale was examined, and after it was realized that the scaled has linguistic equivalence, the reliability and the validity of the scale were analyzed. The confirmatory factor analysis in the study revealed that the scale was compatible with the original form ($\chi^2= 779.01$, $sd= 264$, $p= 0.00$, $RMSEA= .056$, $NFI= .95$, $CFI= .97$, $IFI= .97$, $RFI= .94$, $GFI= .91$ and $SRMR= .059$). The internal consistency coefficients were found to be between .72 and .80, and the test-retest reliability coefficients were found to be between .56 and .69. Also, the corrected item-total correlations of the scale were found to be between .48 and .71, and it was revealed that all the differences between the 27% of the means of the high-low groups were significant (Akin, Akin and Abacı, 2007).

2.4.2. Humour Styles Scale: The scale developed by Martin, Puhlik-Doris, Larsen, Gray and Weir (2003) aims to assess four different dimensions through seven likert-type 32 items pertaining to the individual differences affecting the humor styles. The Humour Styles Scale was adapted into Turkish by Yerlikaya (2003) who carried out the study with 1363 students attending different faculties at Çukurova University. With a sample of 530 students, the piloting of the scale was done while the construct validity of the scale was tested with a sample of 495 students. The criterion-related validity studies were carried out through the involvement of two different sample groups consisting of 137 and 138 students, and the test-retest reliability studies were conducted in a fifteen-day interval with the involvement of a sample of 63 participants. Within the scope of the adaptation of the scale, the scale was translated and the translated scale was evaluated by translation experts; in addition, though the back translation method, the equivalence of the translated scale to its original form was tested and studies related to the construct validity, criterion validity and internal consistency as well as the test-retest reliability were conducted. The findings of the study revealed that the scale was comprised of four factors as determined in its original form, and each factor was found to be equivalent to four sub-scales including eight items. The percentage variance explanation of the obtained four factors is 36,88%. Core values of the factors are respectively as follows: Self-enhancing humour (SEH): 5.22, Affiliative Humour (AH): 2.97, Aggressive Humour (OH): 1.90 and Self-defeating Humour (SDH): 1.70. The variance description percentages are respectively as follows: 16.34, 9.28, 5.97 and 5.30. The Cronbach alpha internal consistency coefficients of the sub-scales were found to be between .67 and .78, and the test-retest correlation coefficients were found to be between .83 and .88 (Yerlikaya, 2003).

2.4.3. Toronto Alexithymia Scale (TAS-20): The scale developed by Bagby, Parker and Taylor in 1993 is a self-assessment scale. Compatible with the structure of alexithymia in theory, the scale originally including 26 items has been developed by improving its psychometric features. The scale used for the study has 20 items and is scored between 1-5. It has three sub-scales, such as difficulty identifying feelings (TAS-1), difficulty describing feelings (TAS-2) and externally-oriented thinking (TAS-3) (Bagby, et.al., 1994a). Two studies have been carried out pertaining to the item selection and the factor structure of the scale (Bagby, et.al., 1994a, Bagby, Parker and Taylor, 1994b). High scores show high levels of alexithymia. The Toronto Alexithymia Scale was adapted into Turkish by Güleç et al. (2009), and it was found that the adapted version was in line with the three factor structure of the original version. After the investigation of the scale's and its sub-scales internal consistency, it was revealed that the alpha value was $\alpha=0.78$ for the total scale and the following alpha values were found for the 3 factors respectively: 1. factor $\alpha=0.80$, 2. factor $\alpha=0.57$ and 3. factor $\alpha=0.63$. The correlation between the 1. and the 2. factors was found to be 0.53 while the correlation between 1. and 3. factors was found to be 0.12. Finally, the value was 0.36 for the correlation between the 2. and 3. factors. The corrected item-total correlation was found to be between 0.22-0.48, and thus considered to be statistically meaningful.

3. Results

Table 1. The comparison of parents' scale scores

	Mother	Father	T score	DF	P value
Total Humour Score	108.9 (19.6)	111.3 (17.5)	-0.99	230	0.33
Affiliate humour score	36.9 (7.7)	36.5 (8)	0.47	236	0.64
Self-enhancing humour score	29.8 (8.4)	30.5 (8.6)	-0.68	235	0.50
Aggressive humour score	20.8 (7.3)	21.9 (6.8)	-1.23	236	0.22
Self-defeating humour score	21.5 (6.6)	22.8 (7.3)	-1.36	234	0.18
Total score of the self-compassion scale	3.5 (0.6)	3.5 (0.5)	0.02	233	0.99
Self-kindness	3.1 (0.9)	3.1 (0.9)	0.29	230	0.77
Self-judgment	3.8 (0.8)	3.7 (0.8)	1.15	230	0.25
Common humanity	3.2 (0.8)	3.1 (0.8)	1.12	229	0.26
Isolation	3.5 (0.8)	3.7 (0.9)	-1.17	233	0.24
Mindfulness	3.4 (0.8)	3.3 (0.9)	0.75	233	0.46
Over-identification	3.6 (0.9)	3.8 (0.8)	-2.02	224	0.04
Total score of the Toronto Alexithymia Scale	55 (8.8)	54.2 (9)	0.72	231	0.47
Difficulty identifying feelings	14.9 (5.2)	14.3 (4.9)	0.98	230	0.33
Difficulty identifying feelings	13.7 (3.1)	13.8 (3.3)	-0.17	232	0.87

	Mother	Father	T score	DF	P value
Externally-oriented thinking	26.5 (4.3)	26.1 (4.6)	0.60	230	0.55

*DF: degree of freedom

As the variables of the scale scores show an adaptable level of normal distribution pattern, the comparison between fathers and mothers were made by means of Student t test. As a result of the comparison of mothers and fathers in terms of their total scale scores and sub-scale scores, it was realized that the only difference was in the over-identification sub-score of the self-compassion scale (t score= -2.02, P= 0.04).

Table 2. The comparison of scale scores depending on the diagnosis of the child and the gender of the parent

Comparison of Humour	Test	P
The interaction between diagnosis and parent's gender		F(1,215)=0.03, P=0.864
Comparison of parent with autistic children		F(1,215)=1.20, P=0.275
Comparison of parent with mentally disabled children		F(1,215)=0.31, P=0.579
Comparison of Self-compassion		P
The interaction between diagnosis and parent's gender		F(1,218)=0.003, P=0.958
Comparison of parent with autistic children	Two way ANOVA	F(1,218)=0.002, P=0.962
Comparison of parent with mentally disabled children		F(1,218)=0.001, P=0.976
Comparison of Toronto		P
The interaction between diagnosis and parent's gender		F(1,217)=0.20, P=0.656
Comparison of parent with autistic children		F(1,217)=0.85, P=0.357
Comparison of parent with mentally disabled children		F(1,217)=0.01, P=0.926

The effect of the dichotomous independent variables such as the parent's gender and the diagnosis of the child on the total scores of the Self-compassion Scale, Humour Styles Scale and the Toronto Alexithymia Scale, which were the numerical variables of the study, were explored using the two way

variance analysis. As a result of the two way variance analysis, it was found that there is no interaction between the diagnosis of the child and the gender of the parent in terms of the total score of the Humour Styles Scale ($F(1,215)=0.03$, $P=0.864$), the Self-compassion Scale ($F(1,218)=0.003$, $P=0.958$) and the Toronto Alexithymia Scale ($F(1,217)=0.20$, $P=0.656$). Also, it was found that there is no statistically significant difference between the parents of the autistic children and the mentally disabled children in terms of the average total score of the Humour Styles Scale (respectively $F(1,215)=1.20$, $P=0.275$; $F(1,215)=0.31$, $P=0.579$), Self-compassion Scale (respectively $F(1,218)=0.002$, $P=0.962$; $F(1,218)=0.001$, $P=0.976$) and the Toronto Alexithymia Scale (respectively $F(1,217)=0.85$, $P=0.357$; $F(1,217)=0.01$, $P=0.926$).

4. Discussion

This research study was intended to investigate the comparison of the scores mothers-fathers with autistic and mentally disabled children obtained in the alexithymia, self-compassion and the humour styles scales. As a result of the study, it was found that considering the comparison of the total scale scores and the sub-scale scores, the only statistically significant difference was in the over-identification sub-score of the self-compassion scale (t score= -2.02 , $P<.05$). This difference, which was found to be in favour of the fathers, showed that fathers experience the feeling of over-identification more than mothers as one of the negative feelings. This finding can be justified referring to the difficulty of father in expressing their feelings and the inability to express feelings because of the attribution of a strong image to the male in our culture. This finding can also be associated with the behaviours expected from the role of fatherhood. According to Neff (2003a), the basic characteristics of the individuals with extreme levels of over-identification are that they get stuck in the negative feelings and thoughts emerging as a result of the negative experiences as well as failures, and they intensively focus on these feelings. It would be fair to state that instead of sharing their feelings and expressing themselves, fathers with mentally disabled and autistic children become more isolated, introverted and prefer to deal with the problems on their own in response to all the hardships they experience. As also maintained by Nolen-Hoeksema (1991), individuals with high levels of self-compassion do not over-identify themselves with their feelings and thoughts. In this study, no significant difference between mothers and fathers was found taking the self-compassion total scores into account. Similarly, no significant difference between genders had been revealed in the studies carried out by İskender (2009) and Neff, Kirkpatrick and Rude (2007). On the other hand, there are some studies indicating that females tend to be more empathetic than males (Eisenberg and Lennon, 1983; Baron – Cohen, 2008) and they are considered to have more self-compassion than me. Still, findings of some other studies (Öveç,2007; Dilek Tel and Sarı, 2011) contradict these views. In addition, studies dealing with the relationship between self-compassion and gender (Kirkpatrick, 2005; Neff, Hsieh, Dejjterat, 2005; Neff and Vonk, 2009; Soyer. 2010; Raes, 2010, Baker and McNulty, 2011) revealed that females are slightly less self-compassionate than males. As a result of the study, it was also found that there is no significant difference between fathers and mothers considering the comparison of the empathetic levels of mothers-fathers with autistic and mentally disabled children. Likewise, the literature review in the field yielded no significant difference in the alexithymia levels depending on the variable of gender of the parents with autistic children (Szatmari, et al., 2008). However, it should be noted that some other studies yielded results indicating that alexithymia varies depending on the gender and the alexithymia scores of males are higher than the alexithymia scores of females (Loiselle and Cossette, 2001, Joukamaa, et.al., 2003, Loas, Fremaux, Otmani and Verrier, 1995, Bağcı, 2008). Another finding of the study is that there is no difference between mothers and fathers with autistic and mentally disabled children in their scores of humour styles scale. Reviewing the literature, one can come across findings supporting the view that the style of humour does not vary between females and males (Abel,1998; Crawford, 2003). Nevertheless, there have been studies claiming the opposite by indicating that males can produce more humour than females (Martin and

Sullivan, 2013). Additionally, there are traces of findings hinting that females and males use humour in different ways. While females resort to jokes and humour related to common experiences, males are more inclined to use humour associated with status. Besides, it was observed that females use humour more when they are with their fellows, whereas males only rarely use humour when they are with their fellows (Crawford, 2003).

Parents of mentally disabled and autistic children are influenced by the hardships caused by the disabilities of their children in different ways. It can be stated that due to the mission of the mother attributed by the society and the high number of responsibilities in looking after their children, mothers are generally more negatively affected. However, the fact that fathers do not seem to be directly involved in looking after their children does not mean that they are emotionally isolated from their children. Moreover, the difficulties they experience in reaching their children might cause them to feel desperate and hopeless, which might be considered as the reason why mothers and fathers not only become more introverted but also cause fatigue and exhaustion for each other rather than encouragement. In this case, it would be true to state that they exhibit similar behaviour and their humour styles are similarly affected. In the current study, no statistically significant difference was found related to the question whether the characteristics of alexithymia, self-compassion and the humour vary depending on the diagnosis of their children. In an attempt to compare mothers having autistic children with mothers having mentally disabled children in terms of anxiety, depression, alexithymia and general psychological symptoms, Firat, Diler, Avcı and Seydaoğlu (2002) carried out a study that yielded the following findings: no significant difference was found between the two groups regarding the alexithymia and anxiety, and the scores of mothers with autistic children were found to be higher than those with mentally disabled children in the obsessive-compulsive, interpersonal sensitivity, depression, anxiety, anger-hostility, paranoid thoughts and psychoticism subscales. Likewise, Szatmari et al. (2008) compared the alexithymia levels of parents with autistic children and the ones having children with normal developmental functions and revealed that the alexithymia levels of the parents with autistic children were higher. On the other hand, in the study carried out by Firat (2000), no significant difference was found between the alexithymia scores of mothers with autistic children and the mothers with mentally disabled children. The investigation of the alexithymic characteristics of the Arabic mothers with disabilities revealed that their alexithymia levels and their scores in the depression and anxiety scales are higher than the mothers with children having normal developmental functions. Additionally, it was found that there is a meaningful relationship between the alexithymia and the alexithymia or depression. It was emphasised that mothers having children with disabilities have difficulties in expressing and coping with their feelings, and the emergence of the alexithymic characteristics for these mothers can be attributed to their stressful experiences (Al-Eithan, Al Juban and Robert, 2012). It was also indicated that when compared to parents having children with other developmental problems, parents with autistic children experience a higher amount of stress and depression, and their life quality is lower (Bailey, et.al., 1996); furthermore, it was pointed out that mothers with autistic children face many sources of stress (Marshall and Long, 2010). In another study, it was realized that mothers of autistic children are more strict than the fathers, and the fathers hold a more distant personality trait than the mothers (Seidman, Yirmiya, Milshtein, Ebstein and Levi, 2011); similarly, it was reported in another study that mothers of autistic children are more introverted, frustrated, discouraged, oversensitive and strict than other mothers (De Sousa, 2010). The difficulties families have in communicating with their children and the unknown effects of autism as well as its influence on different behavioural patterns might cause parents with autistic children to feel more desperate than the parents with mentally disabled children. In this case, it is engrossing that there is no significant difference between mothers and fathers with autistic children. This finding can be explained by drawing attention to the fact that the majority of children taking part in the study (70.9%) were over the age of 6. It can be stated that as the children's age increases, it becomes easier for both mothers and fathers to improve their abilities to get through

the challenges they come across during the process of bringing up their children, and they can adapt to this process.

That the self-compassion level of an individual is high is related to his/her psychological well-being (Neff, 2009; Hall, Row, Wuensch, Godley, 2013). Instead of getting stuck in the hopelessness and despair, Individuals can approach and evaluate situations within an appropriate context by means of self-compassion (Gilbert and Procter, 2006). Rather than running away from the problems; self-compassionate people become aware of these problems, approach them consciously, accept them and take responsibility (Allen and Leary, 2010). In addition to self-compassion, humour emerges as a factor alleviating the problems individuals come across. It is an important indication of the existence of coping strategies. Humour is also connected with many cognitive processes such as problem solving, memory, mental flexibility, abstract thinking, reasoning and imagination (Lyons and Fitzgerald 2004). In addition to its connection with the cognitive structure and learning, it is related to the individuals' maintenance of communication and sharing with the people around themselves (Semrud-Clikeman and Glass, 2010). For these reasons, it can be recommended that while designing the educational programs addressing to mentally disabled and autistic children, activities aiming to support families should be included, and training should be provided in order to boost families' awareness of self-compassion and humour

For further studies, it can be suggested that the difference between mothers and fathers should be investigated following their training about self-compassion and humour styles. Besides, it can be recommended that the current study should be redesigned focusing on the comparison of mothers-fathers having children at different ages so that comparisons could be made in certain critical periods such as the time when the children are diagnosed, they start school and when they are in the adolescence period. Additionally, comparisons could be made using different disability groups and data collection instruments.

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A comparison of the spouse selection criteria and emotional maturity between men and women

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Abstract

The aim of this study was to compare the criteria of spouse selection and emotional maturity in men and women married employees of Fars Department of Education in 2013. The research plan was descriptive – causal and the sample included 123-people. (80-men, 43 women) who were selected randomly with multi-stage cluster sampling method.. Tools used in this study were Emotional Maturity scale (EMS) and criteria of spouse selection. The data analysis based on inferential and descriptive statistics showed that there was no significant difference between the criteria of spouse-selection and emotional maturity in men and women married employees.

Keywords: Marriage , Criteria of spouse selection, Emotional Maturity, Iran;

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Peer-review under responsibility of the Sakarya University.

1. Introduction:

Family is The first and most unique social institution that health and success of a society depends on its health , well-being and satisfaction of its members because The impact of no institution on individuals is that deep and durable. Achieving a healthy society depends on healthy families and the health of families depends on the mental health of its members and enjoy a good relationship with each other. Foundation of a family and its optimal performance depends on many factors such as spouse selection which has ever been considered in different cultures throughout the history and every society has made its own rules based on their circumstances to control and monitor it. spouse selection has had various forms in different societies and times but never has removed by effect of social conditions. Marriage is the first legal and emotional covenant in our life. Spouse selection is a sign of maturity and improvement and it is one of the most important decision that we ever make in our life (yusefi , baghriyan ,2010). Family is the smallest part of a society. A society which is made of good families can be a healthy society and to have this good family there should be healthy people. Marriage is a formal agreement to accept a mutual commitment for having a family life that can help the people to know her way in their life. The contract is signed with satisfaction between two partners on the basis of complete freedom and make a close relationship (malek mohamadi ,Aligoudarzi , 2000). Social psychologists have studied the mate-selection in terms of interpersonal attraction. This group of psychologists has different theoretical perspectives to determine the factors that have influence on individual attractions. In this part we will mention some of the most prominent approaches. Social exchange theory assumes that people seek their own profits in relationships. In balance theory people want to instate a coordination between their thinking and communications, and if doesn't happen they will get very upset and trying to change

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some aspects of their position to achieve a balance. The initial assumption of social equity theory is that people are looking for fairness in their relationships.

2. Method

The research plan was descriptive – causal and the sample included 123-people. (80-men , 43 women) who were selected randomly with multi-stage cluster sampling method.. Tools used in this study were Emotional Maturity scale (EMS) and criteria of spouse selection

2-1.Reserch tools:

2-1-1the criteria of spouse selection

This 22-item scale is developed by Refahi (2007) in Iran and assesses the process and content dimensions of criteria of spouse selection. The content criteria are the Characteristics which are along person, in the other hand Process characteristics show Behavioral and communicational acts, such as communicational skills, coping skills, problem solving and..... By using the alpha test formula, reliability of questionnaire was 88% and reliability of process dimension was 85% and the content one was 74%. By using factor analysis for assessing validity, construct validity in both content and process factors can explain 75% of the questionnaire.

2-1-2 Emotional Maturity scale (EMS)

Emotional Maturity Scale (EMS; Singh and Bhargava, 1991). This scale measures a list of five broad factors of Emotional Immaturity-Emotional Un stability, Emotional regression, social mal adjustment, personality disintegration, lack of independence. It is a self-reporting five point scale. Items of the scale are in question form demanding information for each in either of the 5 options: Always, Mostly, Uncertain, Usually, Never. The items were scored as 5, 4,3,2,1 respectively. Therefor, the higher the score on the scale, greater the degree of the emotional immaturity and vice versa. The scale has total 48 items. There are 10 items per factor except the fifth factor which has 8 items. The highest possible score for the first 4 areas are 50 and the lowest is 10 while for the fifth factor the highest score is 40 and lowest is 8.(For all the first 4 factors the extremely unstable range from 10-20(for 5th factor-8-16),moderately unstable from 21-30(17-24),unstable from 31-40(25-32),stable from 41-50(33-40)). Reliability of the scale was determined by test retest reliability which was 0.75 and internal consistency for various factors ranged from .42-.86.The scale was validated against external criteria, i.e. ., the (d)area of the adjustment inventory for college students by Sinha and Singh (1995).

In this study, the SPSS version 16 was used for analysis. The data analysis was done in inferential and descriptive levels. In the descriptive level the mean and standard deviation parameters were used and statistical method (t-test) was used for inferential level

3. Findings

Table 1: Comparison of statistical indicators in spouse selection criteria for male and female employees after marriage

Gender	Spouse selection criteria	N	Mean	standard deviation
Female	Content	43	48.93	4.95

	Process	43	47.07	3.74
Male	Content	80	48.88	4/65
	Process	80	45.69	5/52

Table 2 :Comparison of statistical indicators of emotional maturity and it's dimension in employees

Variables	Gender	N	Mean	standard deviation
Emotional Maturity	Male	80	94.71	20.63
	Female	43	92.16	19.46
Emotional instability	Male	78	21.60	6.09
	Female	43	21.09	5.53
emotional regression	Male	78	19.35	6.70
	Female	43	19.51	6.43
Social maladjustment	Male	79	19.57	4.55
	Female	41	18.39	4.29
Personality disintegration	Male	79	16.85	5.19
	Female	43	16.07	4.77
Lack of independence	Male	80	14.36	3.62
	Female	43	13.42	3.51

Table 1 shows that average scores of content criteria are more than process criteria in men and women employees.

Table 2 shows that average scores of emotional maturity and emotional dimensions except for the emotional regression in the men are more than women. The maximum and minimum mean are Emotional instability and Lack of independence

Table 3: Test of homogeneity of variance in spouse selection criteria for male and female employees after marriage

Spouse selection criteria	P	F
Content	0.632	0.230

Process 0.080 3.11

Assumption of equal variance confirmed ($p>0/05$) for spouse selection criteria in male and female employees after marriage in Shiraz University.

Table 4 Comparison of spouse selection criteria between male and female employees after marriage

Spouse selection criteria	Gender	N	Mean	standard deviation	t	Df	p
Content	Male	80	48/88	4/65	-0/061	0/951	121
	Female	43	48/93	4/95			
Process	Male	80	45/69	5/52	-1/42	0/158	121
	female	43	47/07	4/37			

The table 4 shows there is no significant difference at spouse selection criteria (content) between women and men after marriage.

Table 5: Homogeneity Test of variance in the emotional maturity of male and female employees

Variables	F	p
Emotional maturity	0.050	0.823

Table5confirmed the assumption of equal variance confirmed ($p>0/05$) for emotional maturity men and women employees.

Table 6 : Comparing the emotional maturity between male and female employees.

Variable	Gender	N	Mean	standard deviation	T	Df	p
Emotional maturity	Male	80	94.71	20.63	.67	121	.506
	Female	43	92.16	19.46			

The result of table 6 shows there is no significant difference between women and men emotional maturity .

Table 7 :the test of variance Homogeneity of emotional maturity dimensions in male and female employees

Variables	Emotional instability	emotional regression	Social maladjustment	Personality disintegration	Lack of independence
p	0.753	0.712	0.488	0.546	0.363
f	0.100	0.137	0.484	0.367	0.833

The table 7 shows that assumption of equal variance confirmed ($p>0/05$) for emotional maturity dimensions in men and women employees.

Table 8 : Comparing the emotional maturity of male and female employees

Emotional Maturity dimensions	Gender	Mean	standard deviation	n	T	df	p
Emotional instability	Male	21.60	6.09	80	0.455	119	0.650
	Female	21.09	5.53	43			
Emotional regression	Male	19.35	6.70	78	-0.132	119	00.895
	Female	19.51	6.43	43			
Social maladjustment	Male	19.57	4.55	79	1.373	118	0.172
	Female	4.29	18.39	41			
Personality disintegration	Male	16.85	5.19	79	0.813	120	0.418
	Female	16.07	4.77	43			
Lack of independence	Male	14.36	3.62	80	1.393	121	0.166
	Female	13.42	3.5	143			

The result of table 8 shows there is no significant difference between women and men in emotional maturity dimensions.

4. Conclusion and discussion

The result showed that there was no significant difference between the criteria of spouse-selection and emotional maturity in men and women married employees.this findings are not consonant with some researches such as ahmadi and colleges (2000),yusefi and colleges (2010) Buss,D.M.(1989),ghafouriyan (2007) , mehrabizadeh and colleges (2008) , shirnejad (2005) haghghizadeh and (2009).at first sight the most important reason to have this difference is the

variation of sampling in this study against others. In all the previous studies samplings were single men and women but in this study married people were analyzed and because of their experience and knowledge, their points of view toward the marriage are more mature and wise. On the other hand, most studies have been done only in the context dimension like age of marriage, economy, culture, education .this study showed that process dimension in marriage and criteria of spouse selection is an important and considerable issue that can be Taken into consideration in next studies.

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A critical reflection on topology of interdisciplinarity in university: Focusing on cultural studies

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Abstract

A question that guided this study was how mainstream discourses on interdisciplinarity have underpinned reproduction of existing social order. In this respect, this study paid attention to minority approaches to interdisciplinarity that included critical perspectives on academic discipline, taking double sense of discipline in Foucauldian sense. Among a good deal of interdisciplinary approaches, cultural studies was selected as main focus and a multidimensional frame to analyze its interdisciplinarity was derived. With this framework, this study examined interdisciplinarity of works of Gayatri Spivak and discussed (im)possibility of interdisciplinarity in the world of global capitalism based on the results.

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Peer-review under responsibility of the Sakarya University.

Keywords: Interdisciplinarity, Cultural Studies, Gayatri Spivak

Introduction

A question that guided this study was how mainstream discourses on interdisciplinarity have underpinned reproduction of existing social order by assuming economic and industrial progress as main function of interdisciplinarity. Such approaches seemed to ignore value question in pursuing interdisciplinarity, adhering mainly to methodical details. Despite of its critical limitation, this kind of interdisciplinarity has been widely accepted and continually proliferated by the very reason that it is majority and gives no threat to established social and academic system.

In this respect, this study paid attention to minority approach to interdisciplinarity that included different perspectives on academic discipline from its majority counterpart, taking double sense of discipline in Foucauldian sense. Among a good deal of such approaches, interdisciplinary field of cultural studies was selected as main focus in that it was one of symptomatic representations emerged out of metamorphosis of university and larger society (Readings, 1996). Compared to previous studies that focused on “pure” interdisciplinary process or outcome, this study attempted to figure out topology of interdisciplinarity, which meant understanding interdisciplinary approach in terms of broader academic and societal background.

Framework

In its effort to contextualize interdisciplinarity, this study tried to develop its frame of analysis to investigate interdisciplinarity of cultural studies based on history and nature of disciplinarity, interdisciplinarity and cultural studies, and frameworks developed by previous literature.

Existing frameworks on disciplinarity and interdisciplinarity suggested how basic structure of the framework could be constructed. They were results of the efforts to define different disciplines or interdisciplinarity and could be distinguished into epistemological, anthropological, and sociological approaches (Barry, et al., 2008; Becher, 1989; Biglan, 1973; Foucault, 1977; OECD, 1972; Nair, et al., 2008). Studies on and within cultural studies suggested that it could be narrowed down to epistemological and sociological dimension for the purpose of this study and gave implications on the details of the framework (Agger, 1992; Barker, 2008; During, 1999; Hall, 1980; Turner, 2012).

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As a result, a multidimensional frame of analysis was derived which integrated epistemological and sociological viewpoint of knowledge. Specifically, epistemological dimension included elements such as concepts and themes, theoretical paradigms, methodology, and interaction among engaged disciplines. Sociological dimension had contextual background, political and reflexive disposition of interdisciplinarity as its subcategories.

Results

With this framework, this study examined interdisciplinarity of Gayatri Spivak's works. She is known as one of the most influential literary and cultural theorists and has been struggled against contemporary society of globalized financial capitalism. Her approaches as such were considered to shed light on what roles and directions interdisciplinarity should pursue facing the society and university that serve for global capital.

The results on epistemological dimension indicated Spivak's attempt to displace dichotomy and hierarchy in theoretical and societal texts. She refused both centralizing and decentralizing conception of culture, power and subject and tried to expose discontinuities among Marxism, feminism, poststructuralism, and postcolonialism rather than synthesize them (Spivak, 1990). The main methodology used for this purpose was deconstruction, which questioned and destabilized the very assumption of the texts (Spivak, 1999). Interaction among disciplines engaged in her interdisciplinary approach could be characterized paradisciplinarity, borrowing her own word (Spivak, 1990), which meant beyond and beside disciplines and narrow interdisciplinarity that remained largely within humanities and social sciences.

In sociological dimension of knowledge, it seemed that Spivak's interdisciplinarity was located in negotiation, tension, and conflict between global capitalist society, globalized corporate university, and ambivalent status of cultural studies within them on one hand, and her personal and academic background as first world intellectual from third world on the other hand (Spivak, 1993). She responded to that situation with radical approach that questioned inequality and injustice in society beyond academy (Spivak, 1999). As well as, permeated all over her interdisciplinarity was ceaseless reflection on disciplinarity, interdisciplinarity, cultural studies, and intellectuals including herself (Spivak, 2003).

Discussion

Spivak's interdisciplinarity indicated the challenges of critical interdisciplinarity that always risk being appropriated by the very forces it tries to resist. One of the ways she stood against it was deliberated self-reflection. Such efforts have implications for mainstream interdisciplinarity that pursues reckless progress without reflection, on one hand, and ask complicated but important question to critical interdisciplinarity of what strategies we might use against system's cooptation of critical approaches, on the other hand. To pretend that quick answer can be provided in this intricate situation would be disguising, as Spivak notes. On the way of engaging this question, however, an argument could be taken into consideration that differentiated master narrative that totalizes every specific perspectives and grand narrative that speaks Big Story including capital or colonial subject (Kellner, 1999). What Big Story we will or ought to speak by interdisciplinarity has to be primary concern of so-called interdisciplinary approaches, although same thing can be said to disciplinary counterpart. If interdisciplinarity is to avoid repeating nightmare of modern, departmental, scientific discipline, its value and end needs to be more attended than integration issue and it should be in terms of exigencies of the times.

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A critical view on communication education and training: an evaluation in the context of communication high school

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Abstract

Today's media, due to its relations to either politics, capital or power domains, is in a structuring which makes concessions on freedom of press through horizontal-vertical-cross monopoly. In such a media structuring, it has become a must to bring up qualified personnel with a critical insight and a good command of today's technologies who can produce information/news for the public. In this era called as "information and communication age", communication sector needs qualified personnel more than ever. In Turkey, communication education is provided at high school, associate degree, undergraduate and graduate degree levels. In addition to increasing numbers of communication faculties day by day, Anatolian Vocational High Schools, which provide "journalism", "radio and television" and "information technologies" programs, give training to "intermediate personnel" for the sector. As students of those programs start to get their education and training at an early stage of their life, education given in these schools is of capital importance in the long run.

In this study, secondary education institutions which specialize in communication education, specific to "journalism" and "radio and television" programs of Antalya Hüsniye Özdilek Vocational High School will be scrutinized in terms of their teaching staff, students, curricula and technical equipment. "Possibility of an alternative communication" can be managed only with qualified, eligible personnel who have occupational ethics, and in this context, early period communication education becomes more of an issue.

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Selection and peer-review under responsibility of The Association of Science, Education and Technology-TASET, Sakarya Universitesi, Turkey.

Key Words: Communication education, high school, media

1. Introduction

Communication education at undergraduate level in Turkey is a widely debated subject with many academic research made on. Due to higher education policies and increasing demand, the number of communication faculties is rising and yearly number of graduates exceeds the sector's needs. Especially ratios of theoretical and applied lessons may change according to faculties, and as a result of that, formation discrepancies may arise among graduates of different faculties. Albeit, it is a subject of another debate that sector does not need that large number of graduates.

While the number of faculties of communication giving undergraduate level education is increasing rapidly, communication high schools founded with the aim of training intermediate staff for the sector

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is today operating within the bodies of Anatolian Vocational High Schools. These schools are not as much in sight as faculties of communication and don't gain sufficient amount of attention to their problems. Thus, the subject of this study is not undergraduate level communication education which is rather visible and widely debated. This study is focused on secondary level communication education. Positive and negative sides of programs, which are primarily founded as Anatolian Vocation of Communication Schools and now operating within the body of Anatolian Vocational High Schools, are the main subject of this study. In this study, both Anatolian Vocational High Schools have been discussed and specifically Hüsniye Özdilek Vocational High School located in Antalya has been analysed.

2. Method

Document analysis and in-depth interview techniques have been applied in this study. Document analysis includes examination and scrutiny of written materials containing information about phenomenon which is aimed to be researched into. Document analysis is a data gathering technique which is inevitable for almost every research. If there is no document, there is no history. (Madge, 1965:75) The essence of in-depth interview is dual conversation. Interviewed people for this study are restricted not with time but with the subject. In-depth interviews are very useful in approaching to social reality and complementation of the information extracted through restricted interviews. (Arslanoğlu: www.gazi.edu.tr)

In this study, document analysis has been conducted in relevant sections of Journalism and Public Relations programs of Anatolian Vocational High Schools in the website of Ministry of Education and documents and curricula of Antalya Hüsniye Özdilek High School. Moreover, in-depth interviews have been conducted with teachers of the high school, Ali Kozan and Dilek Eşki.

3. Communication education in turkey

In Turkey, communication education is given at high school, foundation, undergraduate and graduate levels. Especially numbers of communication faculties giving communication education at undergraduate level is rapidly increasing. Communication education at undergraduate level in Turkey has primarily started within the bodies of two-year media schools. Later in 1992, two-year media schools were transformed into and was named as faculties of communication. After the foundation of Higher Education Council with Law No. 2547, it came to the fore that new regulations were to be made in all existing state universities in terms of education and training.

Along with these regulations, organisation of higher education institutions was re-arranged with statutory decree no. 41 in 1982. With this decree, schools giving education in the field of journalism have been attached to rectorships of Ankara, İstanbul, Marmara, Ege and Gazi Universities under the name of "two-year media schools". In 1992, by making changes within Law No. 3837 and Higher Education Law No. 2908, five existing two-year media schools have been transformed into faculties of communication. Furthermore, the faculty of communication attached to Selçuk University in Konya and faculty of communication sciences attached to Anadolu University in Eskişehir have been established by this law. While the number of faculties of communication within state universities was rising, faculties of communication were also founded within foundation universities when the way of private universities was paved as from 1997. In this process, departments such as communication, public relations, radio-television broadcasting, photography were formed in vocational schools as well. (Uzun, 2007:117-134)

There are too many faculties of communication in Turkey right now. Apart from the main departments of these faculties such as Journalism, Radio-Television and Cinema, Public Relations; there are new departments like Advertising, Visual Communication Design, New Media. One of the fundamental departments of faculties of communication is journalism. In general, the purpose of journalism education can be stated to raise/train qualified-eligible journalists who bear social responsibility in occupational practices and to improve the quality of information produced. Particularly, education of journalists who have an important function in social individuals' perception of the world is of vital importance. Training of journalists, who will take the initiative in transformation of the society in the direction of democratization of the public sphere and establish freedom of information and communication, has increased the importance of education related to the field. (Yıldırım, 2006:125) When we look at the Anatolian Vocation of Communication Schools which were founded with the aim of raising intermediate staff to be employed in the media sector; it can be seen that these schools were designed as four-year educational schools that train bilingual labour force whom the sector needs, who will be employed in the areas such as journalism, radio-television, public relations, printing press, graphics and photography.

According to Meral Özbek, "A qualified communication professional is someone who knows the fundamental problems of the society and the world in which he/she lives and is a citizen who has acquired the vision in the matter of the way to interpret those problems. A communication professional, not as any citizen, but as a citizen who has a primary place in the process of establishing communicational public sphere, is someone who has public responsibility, and therefore he must be well-equipped in this direction, trained to possess ethics of communication and he must be someone who has the chance to improve oneself in the field. And this requires an education program and an educational environment which offers not only structure and mechanism of what socially exists but also choices which enable students to get a critical perspective on what should be existing. (Özbek, 1993: 325).

Both the perspective of media institutions about communication/journalism schools which demean them to organisations that only train workforce for the sector by correlating them to the media industry and the expectations born from this perspective gave birth to frequent grievances of representatives of the sector about the quality of journalism education and incompetence of interns. In addition to the fact that communication educators prefer to teach a theoretical curriculum based on critical theory, it may be counted among the factors which break off the relation between the academy and the sector that the sector expects the faculties of communication to train staff mainly in accordance with the needs of market. (Tokgöz, 2003: 14). In Anatolian Vocational High Schools, it was planned as the main objective to give students liberal education on secondary education level and then to improve students in vocational and technical areas. Thus, students are made fit for life, work areas and higher education in accordance with their interests and skills. In addition to up skilling students in basic knowledge related to their field and occupation with implemented programs, it is aimed to educate individuals who can adapt to change and innovation, can communicate with people around themselves in a healthy way; identify their objectives and take steps in the direction of these objectives; who are creative, open to development and criticism, and who have vocational competence. (<http://www.meslekidersler.com/meslek-lisesi-turleri/anadolu-iletisim-meslek-lisesi.html>)

3.1. Field and branch programs applied in anatolian vocational high schools

In all vocational and technical secondary education institutions subjected to Ministry of Education, the field and branch programs indicated in the following table are predominantly in practice from 42 field and 192 branch Modular Frame Syllabus Based on Competence.

Department of Journalism: Printed Press Reporter, TV Reporter, Newspaper Photographer, Editorial Secretariat

Department of Radio-Television: Cameramanship, Technical Production, Graphics Animation, Television Broadcasting

Public Relations and Organisation Services: Public Relations, Customer Representation, Public Opinion Researcher, Fair/Expo Organisation, Special Organisations

Graphics and Photograph: Photo Shooting, Photoprinting, Graphics

Printing Press: Prepress, Flexo Printing, Offset Printing, Tifdruk Press, Serigraphy and Pad Printing, Post-press. (<http://megep.meb.gov.tr/?page=ogretimProgramlari>)

Ninth grade in these schools is common as it is in all the other vocational and technical secondary education institutions. At the end of ninth grade, students specify their areas of interest and start education and training in that specific area in tenth grade. Lessons which bring students together with common qualifications related to all branches in the field are given in tenth and eleventh grade. In twelfth grade, there are lessons involving occupational qualifications that lead to a diploma. Students make a choice of profession/branch at the end of tenth grade by regarding the sectorial needs, the school's equipment, teachers and physical capacity as well as competence they own. Regional employment opportunities also play a role in students' choice of field and branches. (Kozan-Eşki, 2014: In-depth interview)

The students successfully graduating from the program can continue his/her higher education by getting a field diploma. Graduate students are also entitled to a certificate in consideration of qualifications they acquired in the chosen branch/profession during their education. Qualifications of students who leave the program in any year are utilised in the certificate programs. Education and training activities are applied intended for branch/professions student choose; in the sense that: they will gain common knowledge and skills between all fields, they will have fundamental qualifications in the field they chose, they will be able to fulfil the missions and works the chosen profession requires, they will gain special occupational competences that the profession/branch requires by taking account the current requirements of the field and the profession. (<http://www.meslekidersler.com/meslek-lisesi-turleri/anadolu-iletisim-meslek-lisesi.html>)

Students, who generally undergo training or go to workplaces with the purpose of exercise during their senior year, also become acquainted with the actual business life.

3.2. Distribution of departments in anatolian vocational communication high schools with regard to cities:

Hata! Bağlantı geçersiz. (<http://mtegm.meb.gov.tr/TR/okullar.asp>)

While abovementioned departments have been included in Anatolian Vocation of Communication High School before, they are now gathered within the body of Anatolian Vocational High Schools. Whereas these schools have accepted students through SBS exam till the last year, they will admit students through TEOG as of this year. However, the system of student selection and placement to these schools has changed five times in the past five years. In five years, students went through an interview three times which test and measure their liberal education, skills and occupational competence in addition to SBS; and in two years, no interview has been applied, only SBS points were considered. That is to say, the system changed each year. (Kozan-Eşki, 2014: In-depth interview)

4. Antalya hüsnıye özdilek vocational high school

When Hüsnıye Özdilek Vocational High School is taken into account, there are Public Relations, Radio-Television and Journalism departments. 931 students take education in school and 55 teachers are employed. The school continues education in the dual system.

There are 21 classrooms, 4 computer rooms and one science lab in the school. The lack of infrastructure and technical equipment in the school draws attention as the most major shortcoming. Technical insufficiency of the school was observed. Whereas 34 students are admitted to the school's journalism and radio-television departments every year, there is a decline in the number of graduates of these departments. For instance, there are 24 radio-television students in their senior year, 20 students in the eleventh grade, and 15 students in the tenth grade.

4.1. Technical equipment

When technical equipment of the school is examined:

There are 3 video cameras, 4 digital video cameras, 3 digital cameras, 1 tripod, 2 announcing equipment and 25 tape recorders.

4.2. Syllabus

When it comes to curricula, it can be seen that general courses are taught in the ninth grade. These courses are Language and Expression, Turkish Literature, Religious Culture, History, Revolution History, Geography, Mathematics, Physics, Chemistry, Biology, Philosophy, Foreign Language, Music, Traffic and Gymnastics.

Beginning from the tenth grade, specialisation starts, and the following courses are taught:

Career Development, Basic Communication, Rhetoric, Basic Photography, News Gathering and Writing, Occupational Computer and Media Organisation.

In the eleventh grade, specialisation continues:

Journalism According to Broadcast Type, Communication Law, Media History, News Filming, News Editing, Television News, Photograph Manipulation on Computers, Page Setup, Professional Journalism, Page Design.

In the twelfth grade, students undergo training at the institutions of the sector in addition to branch courses.

We have already mentioned about sub-programs and student transfer to these programs in the departments. However, the transfer between sub-programs has not yet been possible in Antalya Hüsnıye Özdilek Vocational High School. That is because only one branch is available at the moment.

5. The result and evaluation

When Anatolian Vocational High Schools are examined in general, it is clearly visible that the very same problems occurring at faculties of communication exist also in communication high schools to a higher degree. Graduates of these schools have the right of open admission to related departments of community colleges; however, they have no advantages in transition to faculties of communication. The number of graduates is gradually declining because transformation of regular high school into Anatolian High Schools has caused that the demand was shifted to those newly established schools and the number of students of vocational high schools declined as a result.

Schools lack in technical infrastructure and equipment. Due to the fact that many of the equipment are very expensive, it doesn't seem to be easy to cover up the deficiencies. Although there are sub-programs in the departments, students are not given the chance to make a choice due to the lack of equipment, infrastructure and teaching staff; education is carried out only in one program. For example, there is only radio-television programming in Radio-Television department and only printed press reporting in department of Journalism.

Weekly course hours of the programs, syllabus and contents change on yearly basis.

6. Suggestions

-Exam and testing system which changes every year constitutes a major problem for students and their families. Changing system each year leads to confusion and does not provide enough confidence to students who make preferences.

-These programs taught at secondary level education must be configured and coordinated with communication faculties.

-In this period of time where the importance of vocational training has increased, attention must be drawn to decline of the number of students in the programs, and these programs must be made attractive for students to choose.

-The graduates of these departments need to be subjected to positive discrimination in order to get to communication faculties in the undergraduate placement exam.

- It is not required for the teachers to give education in these fields to have a college degree. As a result, teachers who have graduated from very different departments may give training, and this affects the quality of the programs which require specialisation. Specialisation courses of the departments need to be taught by only graduates of communication faculties.

-Education should not begin without the completion of full-fledged technical infrastructure.

-Application areas in which student could utilise at school need to be increased.

-There is no "graduate monitoring system" in schools. The things that graduates of these schools do after education and training process need to be monitored by establishing "graduate monitoring system" for career development purposes.

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A development of blended information literacy learning web for Thai high school students

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Abstract

Students nowadays have to communicate with a ton of the information, since the rapid development of internet technology. Thus for, information-related skill plays an important role in students success. Blended Learning is recently used in many information literacy programs around the world, including in Thailand. Most of researcher try to integrate information literacy model into high school programs, so the aim of this research was to develop a blended learning website for high school embedded information literacy course. The blended learning website was designed from literature reviews and experts interview, then evaluated by 5 experts. A usability testing was conducted with high school student by using 1-on-1, small group and field testing method, subjects were selected from tenth-grade students at Kasetsart University Laboratory School Center of Educational Research and Development. The data were collected and analysed using content analysis and descriptive statistics. The result indicated that there was a significant difference in mean scores between pre-test and post-test.

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Peer-review under responsibility of the Sakarya University.

Keywords: Blended Learning, Information Literacy, Learning Web

1. Introduction

With the fast and continued growth of information technology, it has affected our daily live and led to a better in such things as working, entertainment, business, health care and education especially learning process in 21st century which has become integrated technology in the classroom, so that expanded learning opportunities to many students (Phusiri, 2012).

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From the literature review of the information literacy show that the students in the 21st century can easily access to the information, search engine become a part of their life, so with overused of the search engine made students' information literacy became lower than before. (November, 2010 cited in Bellanca and Brandt, 2010; Eisenberg et al., 2004). Thailand also faced the same problem, Thai students trusted in the data from the search engine and used them without critical thinking. This problem is the main caused that made the students did not understand the lesson clearly. So the appropriate way to solve this problem is the integration of information literacy instruction into the normal learning activities (Andretta, 2005)

Blended Learning is the alternate teaching method that combined the face-to-face and online instruction together, to form a flexible learning environment for students (Jonassen, 1999; Bonk and Graham, 2006; Driscoll, 2002; Singh, 2003). The blended learning is a teaching method that focused on students centered learning, from this point, students can participate more in the classroom. Moreover, this teaching method also made the students gain more motivation and enthusiasm (Dodero et al., 2001; Gulsecen, 2004; Rovai and Jodan, 2004).

Blended Learning is recently used in many information literacy programs around the world, including Thailand. Most of researcher try to develop information literacy model, but there are no suitable blended learning program for Thai high school student. So this study aimed to develop a blended information literacy learning web for Thai high school students.

2. Methodology

In this study, the researcher used Instructional System Design with ADDIE model to develop learning web that consist of 5 steps of design process as follows: Analysis, Design, Development, Implementation and Evaluation

Analysis	Design	Development	Implementation	Evaluation
Learner analysis	Planning	Web development	Try out	Web Evaluation
Content analysis	Design	Web instrument development	Implementation	Information Literacy Evaluation
Learning objective analysis				

Fig. 1. Design Process of learning web

2.1 Analysis

In this step includes the study of research and theories on the Blended Learning, Information Literacy and Learning Web. Then the researcher have analysed the three factors which were

- 1) Learner analysis: The learners are 30 High School students from Kasetsart University Laboratory School who have a basic ICT skill.
- 2) Content analysis: The subject is Thai history which Thai historical figure content.
- 3) Learning objective analysis. In this study, the teacher needs the students able to use a historical method to retrieve the information of the Thai historical figures.

2.2 Design

The learning web design process consisted of two steps as follows:

- 1) Planning: After analyzing information, the researcher put a plan for learning and developed a site map. Then planned to design a learning web follow the historical method activities which easy to

use and understand navigational system for the students. So the learning web from should be interactive forms such as LMS (learning management system) or CMS (content management system).

- 2) Design: Before developing the learning web, the researcher created a storyboard and determined the look and feel of the site. In this study, we use the gold brown color to give a vintage style and historical feeling. We took the subject students into consideration to design the layout of learning web. So we put the navigation bar on the left because Thai students are familiar with left justify format. Then talked over with the advisor and interviewed five experts in educational technology to get more than opinions about the learning web and improved as the suggestion.

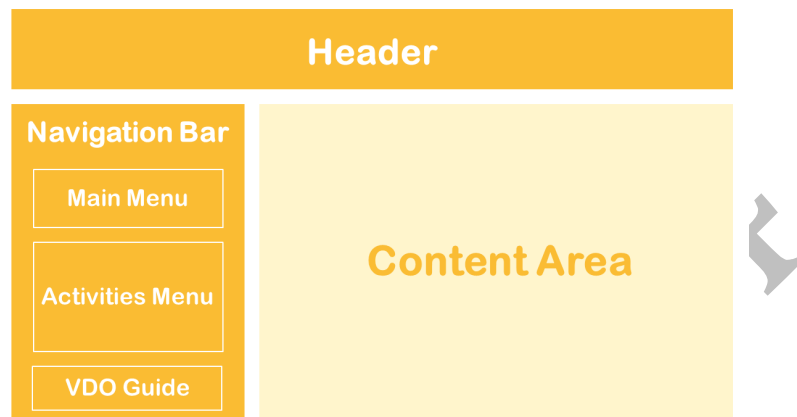


Fig. 2. The storyboard of learning web

2.3 Development

In this step we created the learning web follows the storyboard by using Joomla content management system because it is easier to create, manage the contents and conduct online test. By using the Joomla CMS, it saves time and money. Moreover, students can access the learning web at anytime and from anywhere with internet access.

The development process consisted of two parts as follows:

- 1) Web development: We had considered the web elements from the prototype and used them to develop the functional web site as follows: Font, Graphical Imaging, Video, Color, Icon, Button, Homepage, Learning Objectives, Content and Interactive design in the appropriate areas.
- 2) Web instrument development: We developed the web instrument to be an effective support learning objects in the following order:
 - an online information literacy testing (pre-test and post-test)
 - a recording form by using social bookmarking
 - an information evaluation form
 - a learning activities guide
 - a learning video guide
 - a collecting information form by using Google form
 - a subjects' opinion toward the learning web questionnaire

After developing a website for students, 5 educational technology experts were interviewed and then the experts evaluated the web by using the 5 Likert scale web evaluation form. Finally, we revised the learning web followed by advice from the experts.



Fig. 3. Example of the learning Activities

Fig. 4. The information evaluation form

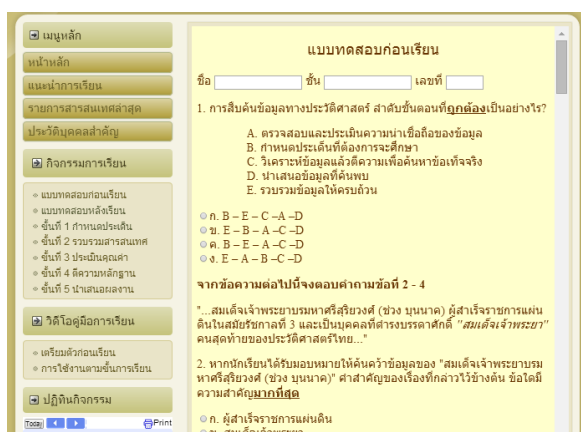


Fig. 5. The online information literacy testing

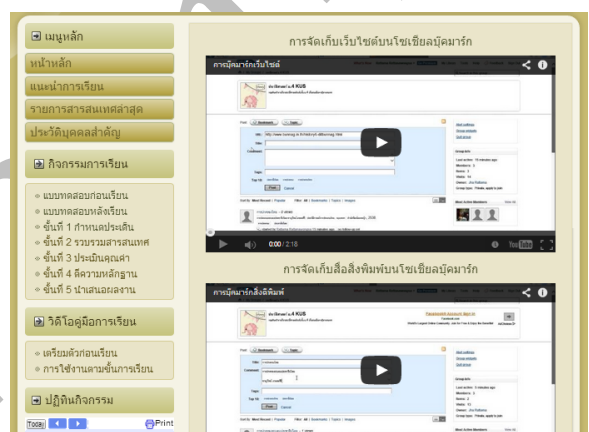


Fig. 6. Example of the learning video guide

2.4 Implementation

We attended to try out a prototype of learning web and tested all of the functionality with non-subjects in this study from Kasetsart university laboratory school by using one to one testing and 2 small groups of 3 and 9 non-subjects testing. After that, we analysed the results and modified appropriateness. Next, we implement the modified one with the 30 subjects from Kasetsart university laboratory school for 8 weeks.

2.5 Evaluation

In this step, the learning web evaluation consisted of two parts as follows

- 1) Web Evaluation: A 5 Likert scale web evaluation form has been created to evaluate learning web for Font, Graphical Imaging, Video, Color, Icon, Button, Homepage, Learning Objectives, Content and Interactive design by 5 educational technology experts.
- 2) Information Literacy Evaluation: we used the pre-test and post-test to assess the information

literacy of the subjects. Then using the questionnaire to get the opinions from the subjects.

3. Results

- 1) The information literacy of subjects' scores of the data was analysed using mean, standard deviation, and t-test dependent were summarized in Table 1.

Table 1: The information literacy of subjects' scores of the data were analysed using mean, standard deviation, and t-test dependent.

The information literacy of subjects scores	scores	Mean (\bar{X})	standard deviation (S.D.)	t	Sig.
Pre-test	30	16.37	4.75	-4.294**	.000.*
Post-test	30	18.80	3.10		

** p < .05

From Table 1, the result indicated that the subjects had information literacy post-test mean scores higher than pre-test mean scores at .05 level of significance.

- 2) The subjects' opinion toward the learning web score was summarized in table 2.

Table 2: The subjects' opinion toward the learning web score

	Mean (\bar{X})	Interpretation
The overall design		
1. Font		
1.1 size	4.38	Very Suitable
1.2 style	4.29	Very Suitable
1.3 font color	4.35	Very Suitable
2. Image		
2.1 consistent of the image	4.53	Most Suitable
2.2 image size	4.56	Very Suitable
3. Color		
3.1 contrast between background and foreground	4.00	Very Suitable
3.2 aesthetics	4.59	Most Suitable
3.3 different between text and hypertext	4.12	Very Suitable
4. Icon and Button		
4.1 meaning of the icon	4.24	Very Suitable
4.2 size	4.18	Very Suitable
4.3 position	4.38	Very Suitable
5. Link		
5.1 correctness of link	4.29	Very Suitable
5.2 correlate between link and information	4.38	Very Suitable
General Characteristic of the Learning Web		
1. consistent of the image	4.18	Very Suitable
2. image size	4.26	Very Suitable
Video Guide		
1. coverage of video guide	4.09	Very Suitable
2. easy understanding of the video guide	3.91	Very Suitable
3. sequence of the video guide	4.18	Very Suitable
Total	4.27	Very Suitable

Note: 4.5 - 5.0 = Most Suitable, 3.5 - 4.49 = Very Suitable, 2.5 - 3.49 = Suitable, 1.5 - 2.49 = Less Suitable, 1.0 - 1.49 = Not Suitable

From Table 2, the overall mean score of the subjects' opinion toward the learning web was "Very Suitable." When considering the details, it was found that most of the opinion were "Very Suitable," except the opinion toward the image was "Most Suitable." The figure of the learning web is shown in Appendix A.

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A didactic model for teaching bioethics: didactic constructivism and narrative imagination. The co-construction of critical judgments, narration, and representation of emotions and feelings

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Abstract

The paper proposes a didactic model aimed at supporting the teaching of bioethics in high schools. It is characterized by a constructivist-learning framework, which theoretically refers to the systemic paradigm of knowledge. The disciplinary domain is philosophy in an interdisciplinary perspective, as contents relate to different issues, such as genetic testing, stem cells, euthanasia, and GMOs. Starting from reflection and leading to the co-construction of critical and ethical judgment, the model develops the cognitive dimension of the pupil throughout five stages, derived from philosophical references: Wonder and the Lack; Torpedoes sea-fish, Wanderer; co-construction of the cognitive and affective map, and participatory dissemination.

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Peer-review under responsibility of the Sakarya University.

Keywords: bioethics; co-construction of knowledge; critical and ethical judgment; private ethics; public ethics; philosophy; emotions; narrative didactics; narrative imagination; dramatization

Introduction. Theoretical framework and general aspects

This paper has the main goal of suggesting a didactic model for teaching bioethics in high schools, which has been developed in the course of a decade, during which theoretical reflection and didactic activities were conjointly applied.¹⁵ The model articulates around a constructivist didactics, whose theoretical framework is the constructivist paradigm of knowledge that refers to the School Palo Alto and to the socio-cultural constructivism, according to Varisco's (2002) perspective.

The model includes five diverse phases, which present both educational and disciplinary objectives. The first four phases – named using philosophical suggestions mainly drawn from some Authors of the history of the philosophical thinking – correspond to the diverse moments of the cognitive process and clarify the related logic and argumentative steps of teaching bioethics. They proceed from a preliminary phase of contact and direct impact with the problem, and through a first reflection, analysis and synthesis, they reach the final phase of critical judgment, which in the case of teaching bioethics is the ethical judgment. The fifth phase is participatory and involves the sharing of the learned knowledge with systems larger than the one of the class and of the school. It encompasses socialization and creativity, using both traditional and innovative tools, such as the development of digital interactives.

The transition from the initial judgment of common sense, to the judgment of critical sense – according to Mori's (2010, pp. 32–33) analysis in relation to the fundamental aspects of ethics – implies a cognitive leap of perspective, which leads to new visions of the world and existence. This important step involves the awareness of those emotions, feelings, taboos, preconceived beliefs and prejudices, which characterize our initial ethical judgments of common sense. This awareness constitutes the prerequisites for being able to build and

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¹⁵Didactic interdisciplinary projects developed at the High School Liceo Scientifico Enrico Fermi, Cantù (CO), Italy: (1) "The children of Prometheus: genetic testing - Science and Freedom 1", school year 2006/2007, in collaboration with IFOM Milano; (2) "Natural-artificial - Science and Freedom 2", school year 2007/2008, in collaboration with IFOM Milano; (3) "The loss of the center. Natural-artificial", school year 2007/2008; (4) "Bioethics and the genomic revolution. Card games and simulations in bioethical dilemmas about abortion, stem cells, and euthanasia - Science and Freedom 3", school year 2008/2009; (5) "Organ donation and transplants. Fiche pédagogique concerning bioethics of the Council of Europe - Science and Freedom 4", school year 2009/2010; (6) "GMOs and media communication - Science and Freedom 5", school year 2009/2010; (7) "Bioethical issues. Knowledge, practices, and representations about generating and abortion in Lombardy", school year 2009/2010, in collaboration with The University of Milan, Department of Social and Political Sciences; (8) "Organ donation and transplants 2 - Science and Freedom 6", school year 2010/2011; (9) "Madness and power among history, philosophy, literature, psychology, art and moviemaking", school year 2011/2012 and 2012/2013; (10) "Addictions to alcohol. Scratch project", school year 2013/2014.

argumentatively defend an ethical judgment rationally (Mori, 2010, pp. 26–27). The model activates therefore those emotional and psychological components of the pupils, which are particularly connected to the teaching of bioethics, because of the existential themes of which it is responsible. The model relies on narrative didactics – in dialogue with the constructivist approach – for the analysis of the emotional components, according to the declination that will be explained in the following paragraphs.

Philosophy is the disciplinary domain specifically considered to achieve the disciplinary and educational objectives related to the construction of ethical and critical judgments. Philosophy is interdisciplinary connected to other knowledge domains, and in particular to biology, which is essential for the understanding of those scientific contents, from which critical judgments will be built (e.g. stem cells, genetic testing, brain death). This connection is very tight and, as Fornero (2005, pp. 11–13) highlights, draws upon the ethical and existential nature of bioethical issues and dilemmas. Bioethical reflection, in fact, makes use of ethics whenever it is needed to problematize about what is ‘the good’ and ‘the right’ with respect to a certain bioethical issue.

Bioethics, when addressing specific issue, such as euthanasia, stem cells, and abortion, faces questions that go beyond the initial scientific domain, and enters in a broader existential dimension that involves death, life, and illness, which pertains to the philosophical domain. Every moral philosophy is, in fact, inscribed within a given philosophical framework of the world and therefore, as Lecalano (2009, p. 10) highlights, people necessarily face moral problems – that raise bioethical issues – through those ethical frameworks and worldviews they bring with them. The bioethical thought cannot therefore be neutral, as it involves the entire human dimension, in its different components.

Bioethics allows guiding the pupils to the study of ethical philosophy not in an abstract way, but through concrete ethical problems, thanks to which they become aware of the usefulness of what they are studying. It thus facilitates the transition from meta-ethics to normative ethics, namely the shift from an ethics whose scope is limited to issues related to the nature and status of the ethics itself, to a moral philosophy that investigates within morality (Fornero, 2005, pp. 11–13) orienting behaviors.

The application of the categories and theories that the students learned with descriptive ethics, is fulfilled thanks to the reflection on the prescriptive-suggestive value implemented by bioethics, making a connection among the problems *on* morality with those that arise *within* morality (Rachels, 1971, p. IX). In this perspective, bioethics also becomes an evaluation tool: for the students, for what concern the assessment of the studied philosophical categories, and for the teachers for what concern the assessment of the students’ learning, as well as their own teaching practice.

Projects’ contents are related to the crucial issues of bioethics and include: genetic testing, abortion, sex and sentimental education, stem cells, euthanasia, organ donation and transplant, bioethics and media communication, mental illness, Basaglia law (Italian Health Ministry, 1978) and self-determination of the patient, GMOs, dependencies and decision-making skills. The covered topics mainly concern ‘restricted’ bioethics, i.e. a kind of bioethics related the size of man, but some themes also dealt with ‘global’ bioethics.

The various components of the model must be observed within a civic and educational framework, which emphasizes the development of knowledge, skills, and abilities, both individual and social, to promote the co-construction of wider participatory and deliberative processes, as well as social solidarity. Teaching – according to the modalities that will be described in the different model phases – uses both traditional tools, such as books, newspapers, magazines, movies, and theaters, and novel tools, such as visual programming languages. The model should be considered with flexibility in respect of contents, tools, and organization, and should be declined according to the specific situation of each school and class context.

For a constructivist didactics

This paragraph will outline the theoretical framework that underlies the choice of a constructivist didactics. For what concern the systemic theory of knowledge, it is here assumed that every phenomenon cannot be understood except in relation to the context within which it develops and interacts. For the understanding of the notion of context, it is interesting to consider, for example, the case of the demographic trends of foxes in an area of northern Canada, which would not be understandable if not taking account of the rabbits (Watzlawick, Bavelas, & Jackson, 2011, pp. 1–5). Watzlawick and his fellow Authors (2011), in their work stemming from the study of forms of psychopathology (neurosis, schizophrenia), give a new definition of ‘disease’ that creates a paradigm shift – according to the connotation of the term ‘paradigm’ provided by Khun (1996) – in the notion of the idea of ‘care’ of the sick person. Watzlawick, in fact, shifts the clinical perspective from the individual (the patient) to the system of belonging, and the gnoseologic position, on which such perspective is drawn, breaks the subject-object dichotomy. What we call reality, in fact, comes from our worldview, built through communication and experience: therefore, an objective reality external to us does not exist.

Cognitive processes interact and are immersed in the contexts in which we live, which are biological, existential, cultural, social, political, and technological. The relationship between the subject and the context becomes then crucial and the identification of the cognitive act becomes socially negotiated and shared (Varisco, 2002, pp. 30–31). Linear relations of cause and effect are therefore replaced by the criteria of circularity and reciprocity, within which individuals co-construct reality. The term ‘co-construction’ indicates that stage of the

cognitive act that, after being passed through the processes of personal reflection and critical judgment, comes to discussion and knowledge sharing. The co-construction of knowledge among the members of the society is a key and revolutionary aspect: in fact, in contrast to the traditional modern objectivist paradigm, the co-construction of knowledge stems from the assumption that there are no absolute criteria in the investigation of reality, and that such criteria, which result from negotiations among society members and institutions, have limited validity in time and in history.

Teaching bioethics, in the proposed model, is consistent with the paradigm of the secular thought, according to the delineation given by Fornero (2005, pp. 62–128), and ethics does not refer to a non-human and ontologically founded legislation.

According to Scarpelli (1998), ethics reasons independently from the hypothesis of God (*etsi Deus non daretur*): the man is the beginning and the origin of the moral norm and human right: the moral standards and values are considered as individual structures and the truth is the outcome of deliberative and negotiation processes.

The constructivist overturning of the subject-object relationship in the cognitive process, cannot be considered without referring to Kant's Copernican revolution, as is highlighted by Von Glasersfeld (1984): if on the one hand, the constructivist view is far from the Kantian gnoseologic conception of the universal and necessary of the *a priori* synthetic judgments of scientific knowledge, however, on the other hand, it has similarities because it recognizes to the subject an active role in the construction of human categories. The non-universality of categories, their being human does not lead, however, to a slip in cognitive relativism or nihilism; in fact, categories will be considered as valid until new cognitive paradigms will prove them wrong (consider, for example, the paradigmatic cosmological revolutions that took place from Ptolemy, to Galileo, to Einstein). The relationship between reality and knowledge is explained by Watzlawick in his "Epilogue" to *The Invented Reality* (1984, p. 330): "Constructivism ... shows that the subject-object split, that source a myriads of 'realities', does not exist, that the apparent separation of the world into pairs of opposites is constructed by the subject, and the paradox opens the way into autonomy."

Therefore, constructivist teaching, which will be described through the five steps of the model in the following paragraphs, gives to the students a prominent and autonomous position in the acquisition of tools for the construction of knowledge, though in respect of their role of learner. In addition to the individual dimension, the proposed model – coherently with the foundations of socio-cultural constructivism – emphasizes the function of the group. Due to this purpose, it draws ideas from cooperative learning, with references to Comoglio and Cardoso (1996), with the aim of developing the student's relational and social skills (e.g. negotiated conflicts and problems resolution, decisions making, leadership skills, individual and group accountability skills, and positive interdependence skills) to help her/him in the co-construction of knowledge together with the other individuals of her/her systems of belonging.

It is to highlight the civic and educational significance of the method; in fact, thanks to cooperative learning, the system-class becomes the foreshadowing of the future civil society, as well as a training place learning processes of deliberation and social negotiation. This is the challenge for the increasingly multiethnic future societies, which will face the problem of developing public ethics that – according to the secular paradigm – are not expressions of one majority moral, but, as Borsellino (2009, pp. 77–78) highlights, of all the morals existing in society. This is even more important in an era marked by great communication transformations enabled by the Internet, thanks to which citizens are facing increasingly faster processing and diffusion of opinions, culture, politics and deliberative processes, according to Levy's analysis (1994). Education institutions shall therefore match up with their tasks in providing training and knowledge that are appropriate for the novel needs of the society.

The practical and interdisciplinary characterization of the didactics, in its five phases, stems from the outlined theoretical framework; compared to the previous works of the Author (2009, 2010), the model presented in this paper introduces the use of a visual programming language in the last phase dedicated to participatory synthesis.

For a narrative didactics between movies, plays, and literature

Narrative didactics, which, as stated, is framed within the broader context of constructivist teaching, relates to the students as a whole, according to their physicality, and rational, emotional and sentimental world, also considering their overall identity within the class. Therefore, the model works on logical and cognitive competencies, as well as on those skills related to the narrative imagination, as Balistreri (2012, p. 98) points out in his analysis. Narrative teaching, regardless of the different used techniques, builds a teaching practice based on the action, from which the narration derives.

The reflection and awareness of our inner experiences and the ability to separate cognitive and emotional aspects in our judgments, act circularly together with the action through the narration, which creates links among people, as each individual story is intertwined with others' stories for similarities and differences. Narrative learning allows the students to come out of their personal world and establish direct relationship with the people surrounding them. Narrative arts, such as cinema, literature, theater, and art, become important tools in

conveying those emotions, feelings, and desires, which are also part of the judgments and that result in concrete actions, concepts, and categories.

In literary and poetical narrative – according to what Aristotle (n.d./1995) highlights in his VI Book of *Poetics* in the analysis of the tragedy – the narrated poem is a creative mimesis of human actions and their plot, aimed at a certain end. The mimesis allows the spectator to identify her/himself with the characters, realizing that cathartic process, which is an integral part of classical theater that does not end with the representation. Catharsis, intended as purification, engages the audience in the sympathy and co-participation of those emotions and feelings that are staged and the identification leads to the process of liberating emotions.

In the narrative didactic model, the narration of bioethical cases is presented through books, autobiographies, newspapers, magazines, and movies. The proposed narrative didactics also encompasses first-person narration made by the students themselves, with different stages and modalities, which will be synthesized in the final participatory phase. The narration of the self on the cognitive level takes place through oral expression during spontaneous discussion, as well as through writing activities, by responding to different deliveries that the ongoing work requires. Moreover, the narration of the self is accomplished through digital presentations, which, according to the different stages of the work, can be addressed to the classmates, to the school network, or to a wider audience and context.

On the expressive level, the narration is developed through dramatization, which more than other tools, offers the possibility of making manifest the pupils' emotional component related to the covered topics and dilemmas, both through verbal, and analog language, according to the analysis of Watzlawick, Beavin, and Jackson (1971, pp. 52–59). Role-play and theater dramatization in its different forms are the proposed dramatization techniques. Particular attention has been given to the working mode of the theater-forum, inspired by Boal's (2005, pp. 21–23) theatre, with some tweaking made by the Author aimed at accomplishing the goals of the proposed model. This technique is a more effective variation of the role-play technique and encourages the phase of catharsis and analysis. According to this theatre technique, everyone, including the public, can perform. Thanks to this participatory aspect, the theatrical simulation becomes a tool that enables new views and interpretations of the reality on several levels, overcoming the traditional passive role of the spectator.

The simulation of the reality, which, according to Bateson's (1979, pp. 30–31) is different from the simplification, allows to see the borders of the considered system. In fact, according to the Bateson's map, while in a representation the sea and the mainland are clearly discernable, in the reality of the territory, this distinction is not possible because the sea and the mainland are continuously mingled in the shoreline. Similarly, in everyday circumstances, human beings live within permanent interactions, in a continuous flow of time. The case simulations allow instead the introduction of boundaries around it, which are not real, but built, like the map with respect to the territory. If correctly placed around the context, the function of the boundaries is to facilitate the understanding of the represented event. The simulation has therefore an important value in terms of knowledge and existential reflection: in fact, it focuses the attention on precise and circumscribed facts and events, with which the individual establishes a direct relationship, both cognitively and emotionally, thanks to dramatization.

Given the theoretical foundations of constructivist learning and narrative didactic, the following paragraphs will describe the five phases of the model.

Phase of the Wonder and the Lack: preparatory phase

It is through wonder that men now begin and originally began to philosophize; wondering in the first place at obvious perplexities, and then by gradual progression raising questions about the greater matters too, e.g. about the changes of the moon and of the sun, about the stars and about the origin of the universe. (Aristotle, n.d./1933, 982b)

The encounter of the students with the theme is the initial stage in which the teacher tries to stimulate the students' motivation, which is the 'wonder' according to the meaning given by Aristotle. From this feeling arises that sense of 'lack', or desire to know, which leads to knowledge. The main goal of this phase is the transition from emotions, to reflection, and eventually to a first analysis.

Theme presentation

The presentation of the theme mainly takes place through narrative didactics, by watching movies related to bioethical issues, following Cattorini's (2006) proposal, and by reading narrative texts. Other effective tools that are used in this phase include autobiographical texts and the direct oral first-person narration of the considered cases, which is, wherever possible, a very meaningful cognitive and emotional experience for the students. For example, the case of Eluana Englaro¹⁶ was presented in a number of projects¹⁷ both through the Eluana's father

2The case of Eluana, had a great media coverage in Italy, bringing to the public attention the bioethical issue of living wills and the debate about the need for a law to regulate it; is a paradigmatic case of applied public ethics. Eluana (25 November 1970-9 February 2009), after a car accident in 1992, lived for 17 years in a persistent vegetative state, until the hydration and nutrition were suspended. This followed a long legal and civil battle led by her father Beppe Englaro that wanted that the wishes previously expressed by his daughter, touched by the medical condition of a close friend, were respected. On 9 July 2008, the Court of Appeal of Milan authorized the father, Eluana's guardian since 1997, to suspend artificial nutrition. This fact led to public and political debates and appeals, making this personal case, a media case without precedent in Italy. For a general overview of the case see: http://en.wikipedia.org/wiki/Eluana_Englaro

3See footnote 1.

Beppino Englaro (2008; 2009) writings and through his direct oral first-person narration. The case allowed the students to approach issues regarding the living will in its different aspects, in particular for what concern the existential and legal aspects related to the long and painful legal battle led by Mr. Englaro.

As far as concern the use of movies, it should be noted that, in respect to written texts, their direct and more engaging narrative modes allow the students to dive into the presented issues from the very first lesson, and has proven to be a very effective tool in the presentation of the problem.

The 'encounter-dispute' with the bioethical dilemma and first moment of reflection

The students' 'encounter-dispute', with the case and with the bioethical dilemma, take place on an essentially emotional level; the term 'dispute', denotes the many challenges, diversity of opinions, and doubts that the presented bioethical dilemma may provoke.

During the spontaneous discussion, the students point out the contradictions and logical inconsistencies that the teacher annotates with the aim of outlining all the subjectivism in formulating opinions, as well as terminological and conceptual inaccuracies and imprecisions. In fact, at the end of the debate in a stage of collection and first reflection, the teacher, together with the groups of students, synthesizes students' contributions about the judgments of common sense and the emerged emotional experiences. Students are encouraged to separate the rationale level from the emotional one, which should not be denied, but made aware, in the cognitive path that will lead to the development of critical judgment.

Synthesis of first reflections and analyses: towards a conceptualization

This stage is conducted using grids of analysis, curated by the teacher together with the students, to formalize the discussion. Issues, at this point of the cognitive and emotional path, are still deliberately unsolved and formally synthesized with question marks (e.g. When a human being dies? What is brain death? What is natural? What is artificial? Is the use of embryos licit to derive embryonic stem cells? And if I change my mind, compared to what I expressed in the living will?).

In some projects the groups make the "card of the dilemmas", to which they give their own answers and solutions during the following phases of the work. The main aim of this process is that the students reach an initial awareness of how their ethical judgments of common sense are full of misconceptions, inaccuracies, prejudices, and not always aware of the emotional aspects. From this, the need to construct cognitive tools suitable for the formulation of critical judgments is derived. Used tools include educational cards, both structured and designed *ad hoc*, various types of written texts, discussions, and cards. In the latter stage of this phase, the student become the narrative subject thanks to the expressive tools of brainstorming and role-play, which allow an immediate generation of ideas and emotions through early reflections about terms and concepts. The teacher takes on the role of facilitator, moderator, listener, and guide.

Phase of the Torpedo sea-fish: first analysis and descriptive ethics

... It [the flat torpedo sea-fish] benumbs anyone who approaches and touches it, and something of the sort is what I find you have done to me now. ... I feel my soul and my tongue quite benumbed, and I am at a loss what answer to give you. And yet on countless occasions I have made abundant speeches on virtue to various people – and very good speeches they were, so I thought – but now I cannot say one word as to what it is. (Plato, n.d./1967, 80a–80b)

At this stage, student misconceptions are Socratically questioned by the teacher, which assumes the role of the torpedo sea-fish that numbs whatever touches it, with the aim of guiding the students to the awareness of not-knowing, according to the Socratic method of irony (Plato, n.d./1921). The main goals of this phase include overcoming the judgment of common sense, making students aware of not knowing, and questioning misconceptions.

Definition of the problem, i.e. the boundaries of the bioethical dilemma

The definition of the problem has the objective of removing misunderstandings around the object of the discourse. This stage sets the boundaries, i.e. the boundaries of the "map" (Bateson, 1979, p. 30) to clarify on what the discussion is about. Bioethical issues, due to their interdisciplinary nature, bring with them many aspects of reflection, and therefore, accurately defining and choosing since the beginning what to consider is a key methodological procedure.

'Purification' of the judgments of common sense

The 'purification' of the judgments of common sense takes place in respect of those information and knowledge, often wrong, learned from the media, as well as in respect of cultural prejudices and emotions not mediated by the reason. The didactic work enters here in the descriptive and analytical phase: the goal is the liberation from the judgments of common sense, unfounded beliefs of daily living, and incorrect communications. Didactics, then, through the Socratic method of irony, includes both lectures and group activities. Comparative analysis among newspapers articles is conducted with the aim of clarifying the definition of scientific terms and concepts, avoiding misunderstandings, errors, and contradictions. These are the pre-requisites for the next stage, which will give the correct meaning to the considered terms.

As well as the analysis of traditional literature, the WebQuest technique, through which the teacher provides a list of Internet resources, along with specific assignments, proved to have a positive impact on pupils. Students are led to reflect about the important role of the media for what concern scientific communication, with reference to Greco and Pitrelli's (2009) and the Author's (2010) works.

To encourage the reflection and analysis of the ethical judgments of common sense, some projects use brainstorming and the theater-forum technique. Specifically, the proposed theater work – drawn upon the Boal's (2005) proposal and adapted by the Author – is organized according the following main stages. A group of students, according to their characters' roles, performs the drama concerning a certain bioethical dilemma, twice, in the same way. During the first performance, the students in the class are the audience and reflect on the characters' actions, motivations and feelings. During the second performance, the students in the class can assume an active and participative role: at any time of the representation, which they consider as critical, they can stop the performance and take the place of a character of their choice, changing her/his lines, actions, feelings, and solution strategies. Changing the actions of a single character will also lead to the alteration of the lines of the other characters, often determining the changing of their roles and of the performance finale. All the students have the opportunity to intervene, and in this way the groups can consider more emotional reactions, and hypothesis of solution to the dilemma, on which, later, they will reflect, debate and argue.

As mentioned before, this work accomplish a twofold purpose: first cathartic, and subsequently reflective and cognitive. The subsequent stage of reflection on the plurality of emotions, reactions, and solutions that have been staged by the different characters, opens to new emotional and rational categories, with the goals of considering a problem solution that takes into account mutual respect and the fruitfulness of the pluralism of ideas, according to the participatory dimension of the open forum.

The first stage of the cognitive process is carried out in this phase, foreseeing the progressive leap from the judgment of common sense, to the sense of critical judgment.

Towards a first scientific and philosophical accuracy of terms and concepts

At this stage, achieved the objective of questioning and collapsing preconceived misconceptions, the process enters the phase of active construction. The synthesis of the work done till this point is completed and each group decide what will be the terms and concepts to be properly defined.

Phase of the Wanderer: analysis and synthesis, construction, and descriptive ethics

... One must do as the traveller who wants to know the height of the towers of a city: he leaves the city. (Nietzsche, 2012, p. 195, Book V, Aphorism 380)

The journey towards knowledge begins now, assuming the striking philosophical image of Nietzsche's wanderer that, without prejudices and dogmas, face knowledge with a critical and genealogical method of investigation that includes the suspect, according to a liberating notion of science in which knowledge means to "ascend", "climb", or fly" (Nietzsche, 2012, p. 195, Book V, Aphorism 380) in a perspective of secular thought and investigation. The main goal of this phase is the formulation of the ethical and critical judgment.

Definition of philosophical and scientific terms and concepts

The stages of analysis and synthesis work together as part of the work on descriptive ethic, toward evaluative ethic. The didactic work at this stage includes both students' individual study and group activities. On the cognitive level, the students, starting from the identified conceptual and terminological ambiguities, come to the correct definition of terms and concepts, which are the basic prerequisites of the didactic program. The interdisciplinary nature of bioethics enables the encounter with authors from other disciplines, like philosophy. Scientific, philosophical, and legal text, as well as newspaper articles and movies are analyzed, and what is meant by critical ethical judgment is gradually learned.

In particular, it is to note the emphasis given to the dialogue between philosophy and the sciences. In fact, the formulation of a critical and bioethical judgment presupposes a correct understanding of the scientific concepts related to the topic. If, for example, I have to make a critical judgment about the usage of embryonic stem cells or about the usage of predictive tests in medicine, I will have to gain a clear conceptual scientific knowledge of the topic, as highlights in the work of Neri (2005). In some projects, a major emphasis is also given to what concern the legal aspects, both in the specific realm of the considered bioethical issue, and in the analysis of the relationship between law, ethics and politics that will be investigated in the following phase.

Study and co-construction of the key issues related to ethics and logic

Ethics is addressed in its key aspects, such as: the main ethical paradigms, in particular for what concern the comparison between the utilitarian and deontological ethical perspectives; the absolute and *prima facie* prohibitions; and the ethics of quality and sanctity of life, according to Fornero's (2005, pp. 22–128) perspective.

The wanderer continues her/his journey with this *in fieri* background, which will lead to the achievement of the development of argumentation skills. To this end, pupils study the basic principles of rhetoric and argumentation: they are trained, according to the perspective of Boniolo and Vivaldi (2002), on recognizing correct arguments from fallacious reasoning, contesting erroneous argumentations, and building the correct arguments in support of their ideas and beliefs. Therefore, the students accomplish the co-construction of meanings, concepts, categories, and prerequisites of the critical judgment, through cooperation and individual study.

Phase of the development of the cognitive and affective map: application and normative ethics

The map is not the territory, and the name is not the thing named. (Bateson, 1979, p. 30)

This phase is based on the principle that the map, according to Bateson's powerful metaphor, is not the territory but its representation; the map is not the mirror of reality, but rather, is a human beings' construction.

However, the map is valid for the human beings, as if it was the territory because *vice versa* they would fall into cognitive relativism. Nevertheless, forgetting the difference, the map would become a cognitive limit, rather than an operational model.

At this stage the transition to normative ethics occurs, through the formulation of critical judgments and moral evaluation. Knowledge maps and temporary categories, thanks to which the students will expand their cognitive and emotional map, are co-constructed. The main goal of this phase is the formulation of the ethical and critical judgment.

Formulation of the critical judgment

This stage collects what have been disseminated in the previous phases. Pupils that have now the categories in their control, individually and/or in groups draw their ethical critics judgments on those bioethical questions that were presented in the initial phase of the Wonder. This formulation is presented as the result of an argument in support of an expressed opinion.

Presentation of the critical judgment to groups and open forum

The groups present their ethical and critical judgments to their classmates as solutions of the initial bioethical dilemmas. Then, during the discussion, students confront with each other, and verify the accuracy of the presented works that are eventually evaluated and self-evaluated, using those criteria established for preparing the ethical and critical judgment (accuracy, clarity, logical consistency, relevance of language, effectiveness, etc.), as well as those criteria related to presentation proficiency. During the open forum, the students challenge the learned categories, by contesting opposite thesis and establishing similarities and differences between the different positions.

The co-construction of a public ethics

This is an important moment of synthesis of the model that at this stage is aimed at creating educational principles with civic value. The ability to negotiate principles, criteria, different ideas and to implement common procedures is promoted: the objective is to understand whether and how it is possible to find a common ground for the development of a public ethics starting from the emerged diversity of opinions drawn on private ethics. This implies to move from the level of the substantive values of private ethics, to the level of procedural values, where, in the name of the principle of tolerance, private ethics is put aside.

Following Engelhardt's perspective (1996, pp. 7–8) – which defines the current society as polytheistic and inhabited by “moral strangers” (due to the impossibility of an agreement between the different moral and metaphysical visions) – and given the Enlightenment failure of a substantial and universal ethic based on the reason, for not falling into nihilism and moral indifferentism, a credible and feasible direction is that of contractualism, i.e. a secular formal ethics that is conventional, at the core of which is the respect for individual freedom.

Therefore, the future citizens of an increasingly pluralistic and fragmented society should have the skills and sensitivity of being able to achieve public ethics, which arise from the peaceful negotiation between individuals, according to the secular paradigm, as highlighted by Borsellino (2009, pp. 77–78). The model here presented foresees the achievement of this goal not only on the cognitive level, but also on the level of empathy, in order to make the “moral strangers” (Engelhardt, 1996) increasingly less strangers to each other.

Used tools and contents include written assignments, like short essays and articles to be shared on local newspapers and on the blog of the school.

On the narrative level, in this phase of synthesis, the theatre works related to the simulation of bioethical cases, dilemmas, ethical committees, and parliaments, which have been developed during the project, are staged within the class both traditionally and through the theater-forum. The performance is followed by discussion and evaluation, according to specific criteria related to the construction of the theatre scenery, analysis of the characters, formal and logic consistency and accuracy of the script, such as scientific, bioethical and legal aspects addressed by the topic.

In this final stage, the teacher takes on the role of the supervisor, director, and facilitator. Moreover, she/he may now express her/his view about the raised issues, as well as her/his own frame of values, since the students have now appropriate tools for formulating and analyzing the critical judgments. The teacher, then, will take part too in the discussion with the students, not only with the role of teacher, but also as a citizen, with her/his own perspective of thought.

Phase of participatory dissemination between Scratch and theatre: co-construction and synthesis

This phase is dedicated to the synthesis and sharing within the system of the school and with the wider online community of what has been learned, emphasizing the dimensions of socialization and creativity, and using both traditional and novel tools.

The use of Scratch,¹⁸ which enables students to program their own interactive stories, games, and animations and share their creations with others in the online community, has proven to be a very effective tool that fulfills the theoretical assumptions of the proposed model, according to which knowledge is an open process of

¹⁸Scratch is a project of the Lifelong Kindergarten Group at the MIT Media Lab (<http://scratch.mit.edu>). It is provided free of charge.

continuous co-construction. In fact, Scratch helps students learn to work collaboratively, as its code is open source and then editable to create new projects.

In the project “Addictions to alcohol. Scratch project” carried on in the school year 2013/2014, Scratch has been used to create a snakes and ladders game¹⁹ that addresses the issue of addictions. This game was very successful because particularly akin to the sensitivity of the young students. A maximum of two players, by using a virtual die, move along the game board boxes that may be questions boxes or accidents boxes with events randomly selected from a designed set. When a player move on a question box, she/he will answer a question related to addictions; at the end there will be a single winner. There are two typologies of questions: the first is related to the different types of addictions and the latter is specifically addressed to the addiction to alcohol. The game includes 100 questions and answers that have been created by five groups of students. The class was divided into several working groups with different tasks: graphics, coding, questions development, design, and details. While designing the game, students undertake the role of disseminators, and this contributes to a progressive internalization of the learned knowledge. Moreover, the game is an effective evaluation tool, both with respect to the knowledge learned by the pupils, and with respect to the work of the teacher.

Traditional tools used in this phase include the selection of some articles written by the students during the diverse phases, to be published within the network of the school with the goal of launching an open forum around the topic addressed. Moreover, students present their work to other school’s students and/or parents, and to a wider public at selected cultural events of interest. Finally, students create posters for local exhibitions²⁰ and bioethical cards that the school will use with educational purposes.

On the narrative level, this phase shares with an audience composed by other students and parents the theatre performances that were staged within the class in the earlier phases. Fulfilling the goal of participation, the representation of bioethical dilemmas using the technique of the theater-forum, in this phase proposes the bioethical dilemma to a broader audience, enabling comparisons between more opinions and judgments.

Conclusion

The model for teaching bioethics proposed in this paper is framed within the theoretical framework of the constructivist theory of knowledge, consistently developed according to the secular dimension of learning and teaching. The model is aimed at the development of cognitive, emotional, and social skills according to the five phases of the Wonder and the Lack, the Torpedo sea-fish, the Wanderer, the development of the cognitive and affective map, and the participatory dissemination between Scratch and theater. On the cognitive level, the diverse phases follow a process that from descriptive ethics come to normative ethics; the bioethical dilemmas and their solutions are addressed through the study of philosophy, which offers the foundational categories of the logical and rational thought for the co-construction of the critical and ethical judgment.

Students acquire knowledge and cognitive skills according to the operational model of the map: the final goal of the didactic work is that they can acquire the ability to trace new maps, with the willingness to take on new challenges, and with the understanding that knowledge is a never-ending path, as well as that the map is not the territory.

The perspective of an open knowledge is made tangible, thanks to the use of novel tools, such as the open source educational and recreational product Scratch, which allows the sharing of the learned knowledge with others online users through games.

The narrative aspect, through cinema, theater, print works, autobiographical writings, and first-person oral narrations, allows the presentation of bioethical issues taking into account also their affective and emotional components, with the important outcome of declining philosophy in everyday life, by testing and applying the studied ethical categories. In this sense theater performances proved to be very effective, especially the theater-forum, which favors the empathic ability to see the world through the eyes of others.

In line with the socio-cultural foundations of constructivism, the model emphasizes the role of the group, and for this purpose draws ideas from cooperative learning in a civic dimension. The aim is to develop the student’s social and interpersonal skills, which, together with the logical and argumentative competencies, will help her/him in the co-construction of knowledge with other individuals of her/his systems of belonging.

A great challenge for future societies, increasingly multiethnic, will be their ability to develop public ethics, and the school must take on the educational role of training future citizens giving them those tools that are best suited in this sense, favoring knowledge, solidarity and social peace. The ability of co-construct knowledge, logical and critical thinking, participatory knowledge, perspective of secular thought, and empathic and civic skills, are the major purposes and keywords that characterize the model, which has the educational goal of keeping up with the times, responding to the new emerging needs of society.

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¹⁹The game will be published and made available online by end of 2014.

²⁰The project “Madness and power among history, philosophy, literature, psychology, art and moviemaking” was presented at the Book Festival in November 2102 in Noto (SR) and in an exhibition organized by the municipality of Cantù (CO) in June 2013.

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Appendix A. The image of the learning web



บุคคลสำคัญแห่งกรุงรัตนโกสินทร์

☑ เมนูหลัก

หน้าหลัก

แนะนำการเรียน

รายการสารสนเทศล่าสุด

ประวัติบุคคลสำคัญ

📁 กิจกรรมการเรียน

- » แบบทดสอบก่อนเรียน
- » แบบทดสอบหลังเรียน
- » ชั้นที่ 1 กำหนดประเด็น
- » ชั้นที่ 2 รวบรวมสารสนเทศ
- » ชั้นที่ 3 ประเมินคุณค่า
- » ชั้นที่ 4 ตีความหลักฐาน
- » ชั้นที่ 5 นำเสนอผลงาน

📺 วิดีโอคู่มือการเรียน

- » เตรียมตัวก่อนเรียน
- » การใช้งานตามขั้นการเรียนรู้

📅 ปฏิทินกิจกรรม

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Jha Rattama
January 15, 2013

สรุปรายชื่อสมาชิกกลุ่มที่แจ้งเข้ามา

กลุ่มที่ 1 ชัยชนะ, กัทรชิต, ศุภณัฐ, ปัทมกร

กลุ่มที่ 2 ธนธิป, สุทธิรัฐ, ปิณฑธร, ปิณฑพงษ์

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Jha Rattama กลุ่มอื่นๆ มารายงานตัวกันด้วยนะละ
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111

A historical background of the university with an emphasis on trends of the XXI century.

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Abstract

The article focuses the university, highlighting some of their trends in the XXI century. The study analyzes its characteristics in various stages, as corporation or an institution. Discuss the challenges the Brazilian legislation. The research is of nature qualitative, based on studies of some theorists, like Luckesi, Trindade, Gaddoti, among others. The article concludes that the trajectory of the university, historically makes possible the discussion of the changes that occurred at the end of the twentieth century, there included the office of teaching, research and extension and the new competences given to the faculty including the innovations proposed by technology.

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Peer-review under responsibility of the Sakarya University.

Keywords: University; institution; teaching.

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Introduction

The university, throughout history, has presented different characteristics, depending on the political impositions of every period of its existence. Initially, in its origin, in Europe, brought a corporative idea. Later, generally in Latin America and particularly in Brazil, the university gradually since 1990, has faced a complex process of change, deserving priority attention to dilute the complexity involved in educational relationships.

The university system, in the current phase of modernity, occupies a strategic position in the social, economic and political development process because of the appreciation of the knowledge, considered essential for the labor market, which appears increasingly demanding requirement, considering innovations imposed by technological trends.

Therefore, the issue of this paper is intended to discuss the challenges faced by the university at the beginning of the XXI century. Within this perspective, this research develops a study on the historical trajectory of the university, from its origins to the contemporary moment, when it reaches an institutional status.

Moreover, considering the new trends that involve the university in this passage of millennium, the study addresses the office of teaching, research and extension and skills of teaching practice in higher education, especially because of the new technologies. The survey observes a qualitative methodology, based on the study of some theorists, such as Cipriano Luckesi, Oliveira Netto, Hégio Trindade, among others.

1. A path from Europe to Brazil

Under a retrospective look at the History records that the university, worldwide, emerged during the twelfth century. According to the season, added elements that foster understanding of their corporatist or institutional nature. To understand these peculiarities, is indispensable historical incursion aimed at proper reflection on the complex problem involving the Brazilian university in the twenty-first century.

Originally, the word *universitas* was applied with the idea of corporatism, extending the scholastic societies and, probably, by the fourteenth century, is now used to refer to a community of teachers and students. As Dirceu Benincá (2011, pp. 32 and 50), "universities have emerged to serve the interests of the bourgeoisie on the commercial activities that were beginning to develop." Your first responsibility is to be "the great translator of intermediate scientific knowledge, the results obtained by science and multiple concepts in order to make them intelligible and socially useful."

According to Varela (2013, pp. 19-20) "the first universities of the Western world, founded in Italy and France, had an overtly scholastic nature, absorbing the role that religious institutions were carrying out, through the monasteries." Its main function "locus of knowledge to a feudal society in transition, at the dawn of the Renaissance", sought to satisfy the nascent civil society (bourgeois, craftsmen) in the centers of priestly training, with the mission of educating the thinking elite of the time.

As Benincá (2011, p. 32), in this initial period, there are some universities, such as in England - Oxford, Cambridge in 1096 and in 1209; Spain - Salamanca in 1218, Murcia in 1272, Complutense of Madrid, in 1293; Italy - Modena, in 1175, Padua, in 1222, Naples in 1224, Siena, in 1240; France - Montpellier in 1220, Toulouse, in 1229; in Portugal - Coimbra, in 1290; Czech Republic - Prague in 1348; Austria - Vienna, in 1365. It is noteworthy that, within the university, students were grouped into two basic subdivisions: the powers and nations. These met many foreigners, originating from different countries, who wished to study in universities. Each study area promoted the formation of a faculty: Faculty of Arts, Law, Medicine, Theology, etc. Thus, various specialized universities have emerged in the teaching of law, such as the Bologna (Italy) and Paris, with specificity in the field of theology.

The second sentence faced by the university, according to the Trindade (1999, p. 11), dating from the fifteenth century, at which time "the Renaissance university receives the impact of trade transformations of capitalism and the literary and artistic humanism, which blooms in the Italian urban republics and extends to major countries of central and northern Europe, "reaches the major countries of central and northern Europe, and "also suffers the effects of the Reformation and Counter – Reformation."

The third period during the seventeenth and eighteenth centuries was marked by scientific discoveries in various fields of knowledge, under the influence of the Enlightenment of the eighteenth century, promoting the "recovery of reason, critical thinking, freedom and religious tolerance." According to Trindade (1999, p. 11), with the onset of the Industrial Revolution in England, "the university begins to institutionalize science in transition for models that will develop in the nineteenth century", whose transition to modernity identified the University of Enlightenment. In the nineteenth century, begins the fourth quarter, suggesting the characteristics of contemporary universities. It instituted the modern university, whose main characteristic introduce "a new relationship between state and university, allowing you to configure the main variants of current patterns universities."

The historical background shows that while in Europe unfolded deployed a network of universities in the Iberian Peninsula to Russia and southern Italy and the Nordic countries, the university enters the ports of the Americas, when "the conquerors transplanted to the Caribbean in the early XVI, the first university inspired by the Spanish model" century. Turn as the Trindade (1999, p. 11) points out, the U.S. Atlantic coast, colonies sent their children (1650-1750) to study at Cambridge and Oxford in the colleges of English models that inspire Harvard University (Cambridge).

According Trindade (1999, p. 11), there is no single standard university in Latin America. "In Spanish America, the university is implanted after the conquest, and by the end of the seventeenth century, there is a network of twelve institutions from north to south of the continent." In Central America, the first university was established to Santo Domingo, in 1538. In 1613, the Jesuits founded the sixth university in Cordoba (AR). He notes that "the Spanish transplant model is not only the old University of Salamanca, but especially the New University of Alcala, (actual Complutense de Madrid) and by the end of the seventeenth century dominates the traditional pattern of the faculties of theology, law, arts and medicine."

With respect to Brazil, from 1808, with the arrival of the Royal Family, schools and isolated professional colleges were created, with the first course of Surgery, Anatomy and Obstetrics. As Luckesi (1987, p. 34), from 1930, begins "stress storage and transformation of higher education in Brazil. The gathering of three or more colleges could legally call themselves universities. "Along these lines arise other universities: Minas Gerais, in 1933; São Paulo, in 1934; Rio Grande do Sul-UFRS and University of Paraná-UPR; University of Brazil (existing), was later federalized as the Federal University of Rio de Janeiro – UFRJ.

By the 1950s, many state universities were federalized, with the exception of the University of São Paulo-USP, which remains governed by the state government. In the next decade, the project was designed at the University of Brasília-UNB, as a research institution and cultural center in 1961, by Anísio Teixeira and Darcy Ribeiro. In this context, it can be stated that although the emergence of the university in the Americas occurred in the seventeenth century, the Brazilian university was institutionalized only in the XX century.

At the end of the century, already noticed an unprecedented demand on higher education, which combined with the diversification of courses, became a patent reality that several countries would face. In this historical path, it appears that the university, in Brazil, was and still is a privileged place since it makes possible to know the

universal culture and enables to create and disseminate knowledge; and an open door for a few people the immense population which also has a high number of illiterates that populate the country.

2. Knowledge, information and research.

Information, knowledge transfer and research elements are considered, fully interconnected. Considering the university as a space where it generates and transmits knowledge, has the essential information as the scientific, technological and social achievements input. The theme that is associated with the issue of university autonomy. Implies that the institution requires the dissociation of teaching, research and extension solidifying in its very essence to transform knowledge.

For Oliveira Netto (2005, p. 45), "the creation and production of knowledge through critical reflection of reality is that the university can fulfill its mission." In the same sense, adds Luckesi (1987, p. 41): a "university that does not take themselves to reflect critically and on an ongoing basis about the historical moment in which she lives [...] is not performing its essence, a feature that specifies such criticism." Reiterates Luckesi the university is, par excellence, embodied reason, institutionalized intelligence. Therefore, their nature is eminently critical.

Luckesi (1987, p. 42) and Oliveira Netto (2005, pp. 45-46) reinforce the idea that research is the main function of the university without research and no need to talk about university. With this, the authors add that the university needs to extricate itself from the reality of the traditional institution, so that learning is the accumulation of knowledge and innovation say, preventing the student pass to store repetitive information inconsistent with reality. To Luckesi (1987, p. 42), the university "can only perform such functions, when you are able to train specialists for the leading cadres of the university, the city, state, nation acutely aware of our social, political, economic and cultural [...]" It is understood, as Luckesi, in the university we want to "become possible and usual work, reflecting our historical and geographical reality in their political, economic, social and cultural levels."

Oliveira Netto (2005, p. 46) calls Luckesi explain how is the search for information on production, creation and transmission of knowledge in the university. The response Luckesi (1987, p. 40) is that: "in this center, we seek the maximum possible information at all levels in order to which reality is perceived, questioned, evaluated, studied and understood in all its angles and relationships with rigor, so it can be permanently transformed." This is the desire of Luckesi (1987, p. 41): "we want to build a university, not a single school of higher level." Want to establish a "committed exclusively to the increasingly serious pursuit of truth through the exercise of creative assimilation mentality

Moreover, says, still, we do not want a university in which the teacher appears as the only subject, as the master speaks ready truths and owns indisputable criteria of right and wrong. When referring to knowledge, Luckesi (1987, p. 43) adds that "we want a knowledge from a lived reality and not stereotyped by predefined criteria and distant and alien to what we have here and now cultural situations." In this sense, warns Benincá (2011, p. 58) about the risks of devaluation, "in the context of neoliberal economy, knowledge is often seen as a commodity. Hence, the tendency to understand education as a preparation predominantly technical or contributors to the market."

It would be pointless to Brazil's Federal Constitution (art. 3), predict how objectives of the Federative Republic to eradicate poverty and marginalization, reducing social inequalities and combating prejudices of color, race, age and sex etc. Only, universalizing education and empowering people to take, critically, a creative attitude towards society, is that is possible to think about the effectiveness of constitutional rule. These objectives are covered by Law No. 9.394/96 - Law of Guidelines and Bases, in article 43, III, to stipulate that higher education aims: "to encourage research and scientific research aimed at developing science and technology and the creation and dissemination of culture, and thus develop an understanding of man and the environment they live."

Larrosa Bondia (2002, p. 27), refers on knowledge, declaring it as "science and technology, something essentially infinite, which can only grow; something universal and objective, in some impersonal way; [...] As something that we can appropriate that we can use; and something that has to do fundamentally with useful in narrowing its more pragmatic, in a strictly instrumental sense. "The author adds that "knowledge is something that is outside of us, "therefore, not always, is a carrier of knowledge. This is a result of science and technology, which tends to grow in proportion to the personal involvement.

3. Trends in the XXI century

The twenty-first century, now in its beginning, is considered the age of information, bringing new trends with regard to university. Their rallying up new horizons imposing discuss some topics, such as: teaching practice. The analysis of this occupation is therefore crucial to understanding the nuances of the university in these new times. This teaching has its roots in Latin. Etymologically, *docere* means to teach, instruct, show,

indicate, imply. Ilma Veiga (2006, p. 86) notes that the term teaching was recorded in Portuguese, in 1916, which "implies that the use, or rather the appropriation of the term is something new in discourse about education." Formally, teaching is the professional work of teachers, who play a set of functions that underlie the tasks of teaching classes.

Due to new working conditions, some conventional training functions, considered teaching as mastery over the discipline and know explain it, have become more complex. Furthermore, the requirements imposed by technology changed teaching practice hitherto adopted. The practice of teaching, other tasks are assigned to teachers at the university: beyond education (teaching), research, administration in various sectors of the institution and design projects. It is further the academic orientation: monographs, dissertations and theses burdened the exercise of the teaching activity.

Beyond this load of teaching activities, yet there is an unquestionable need to improve the standard of quality of higher education. And this demand for perfection implies some changes. However, says Oliveira Netto (2005, p. 50): "a radical change in the quality of teaching will be possible only when a policy is adopted for recovery and training of teachers." What about teacher training, the teachers well know: that is the big issue with many difficulties.

In this sense, are timely words of the current President of the Republic, the inaugural date of his inauguration in January 1, 2011, Dilma Rousseff emphatically said: "Exist only quality education if the man teacher and the woman teacher are treated as true authorities education with ongoing training, appropriate remuneration and solid commitment of teachers and society with the education of children and youth." Power would question here: how a teacher will be an educational authority, without a strengthened knowledge by research? Their knowledge will reach the essence of the university? What is the quality of education provided to children and youth?

All this discourse constitutes precept of LDB (art. 52), which provides that "universities are multidisciplinary training institutions of higher level professional staff, research, extension and field and cultivation of human knowledge [...] I - a third of the faculty, at least with academic degrees in masters or doctoral [...]" However, the practical reality of the teachers did not include funds for onward continuous training, not to mention that not many institutions release of their teaching activities, even if they fail to provide any funds for this purpose.

With regard to teaching, the Law No. 9.394/96 - Law of Guidelines and Bases of Brazilian Education - LDB provides, in article 13, several tasks, among which stands out that teachers have: a) to participate in the development the education program; b) - to prepare and carry out the plan of work; c) facilitating student learning; d) establish recovery strategies for students of lower income; e) administer the academic classroom hours and days set etc. To some, it appears that the field of university teaching was expanded. Considering teaching as a specialized activity, Veiga (2006, p. 87) defends its importance in the wake of the professional view: it is a dynamic reality grounded in collective action, "is produced by the actions of social actors [...], the docents. Teaching requires professional training to your exercise: specific to exercise it properly knowledge." Moreover, the acquisition of knowledge and skills related to teaching aims to better the quality of their educational work.

Veiga (2006, pp. 87-88) also emphasizes that university teaching should be innovative. Breaks the conservatism of the teaching and learning process, modifies the form to rate and search.. And when exercised ethically, makes sense in the construction of learning. For the researcher, teacher training university requires an understanding of the important role of teaching that provides a scientific-pedagogical depth that "enable key issues facing the university as a social institution, a social practice that reflects the ideas of training, reflection, critique."

In this sense, Luckesi (2011, p. 139) talks about learning from a critical and constructive teaching practice. Says that the teaching practice is critical for understanding, propose and develop the teaching practice in the context of their social determinations; the teaching function is constructive "when working with scientific and methodological principles that give account of teaching and learning for the development of the students." From reading, it appears that Luckesi thinks the university, with some concern about teaching practice. Therefore, it presents some indications of fundamentals and procedures that, if used, may translate, "in practice, the principle of being interested in what learners learn and develop individually and collectively."

According Moacir Gadotti (2003, pp. 67-68), "the teacher [...] builds, inhabits a world in which interiority makes a difference, where people define themselves by their visions, passions, hopes and utopian horizons." In this sense, the teaching practice presupposes educator establishing a worlds of dreams, mediator hopes shepherd projects. Gadotti declares himself does not know how to prepare a teacher. You may not be accurate. Presumably he always is ready, because his training goes beyond the pedagogical relationship. Gadotti

(2003, p. 69) notes that teaching "is not over studying simply to be able to guarantee your little place in the train of history; it is, [...] to study in order to gain competence and help change the course of this tram, or help build a society where there is place for everyone." With this, the author suggests that education needs changes that include power to help build an egalitarian society without prejudices, without injustice.

Gaddoti (2003, p. 70) explains, "because being committed, engaging, be ethical, part of your responsibility as a teacher" means practicing their profession responsibly, ethically, with love and hope. The educator believes that the world may be better because it contributes to it. The production of knowledge is an integrated feature of the teaching function and contributes to a reflective of the future professional activity: "articulates curricular components and research and intervention projects, taking into account that social reality is not an objective discipline and that requires the use of a methodological plurality."

Veiga (2006, pp. 12-16) also warns: "the scientific knowledge generated by universities is not to mere disclosure, but it is for the betterment of their judgment." Thus, one can say that, in a globalized context, the complex professional activity within the teaching, marked by the inclusion of new technologies, requires the actors of education reshape their relations in the social environment. This does not mean turning the new culture in recycled routines, but rethinking learning; or to adapt the learning and teaching to society that both requires. Certainly, teachers, students and administration should jointly seek alternatives that allow arriving at safe paths that lead everyone target named university.

Conclusion

During an ancient crossing, the university had different characteristics. Earlier, as a corporate idea meant place where studies performed various branches of human knowledge. Did not denote a totality of knowledge. However, it understood the place where students from different countries could study. Thus, speaking university say one implied universality of people gathered for the study of an area of knowledge.

In general, universities in many countries in recent decades, tend to have very similar characteristics, regardless of the differentiated value of your savings and how its subsystems of education were established. In America, the settlers contributed to the founding of several universities inspired by the European model. In the U.S. its inception had adopted the English model, as noted at Harvard University.

In Brazil, the university was an innovation of the twentieth century. Initially the institutions of higher learning, not necessarily universities, developed, more focused on health practices activities. Subsequently, several universities that have spread in various regions of the country, mainly in the southern and southeastern regions were created. Only at the end of the twentieth century the number of colleges has multiplied uncontrollably, changing teaching activities.

In this context, the university with an institutional status, proposes that the teaching activity shall comprise a cluster of functions by requiring increasingly, commitment and responsibility. Besides this overload pedagogical tasks, continuing education is necessary to compose the new profile teacher, especially because of the demands of new technology, which was not necessary in the delivery of lessons during the twentieth century.

Faced with new horizons of the century, they propose a new face to the university it is suggested to the teacher designing new settings, through a more careful look at with students, and a greater commitment to you even investing in their continued education, without which no one imagines the possibility of at least overcome educational difficulties, specifically in the teacher student, this dawn of the third millennium.

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A lecture to explain endocrine disrupting chemicals to the second class students of a medical faculty

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Abstract

Endocrine-disrupting chemicals are the chemicals exposed at the outside, which alter the function of the endocrine system or cause adverse health effects in healthy people and in their children. These chemicals are taken mostly from plastics, detergents, pesticides, insecticides and dyes. The bisphenol A and phthalates used in the plastic, the heavy metals taken by food, respiratory, skin and transplacental ways to the human body, dioxins and several chemicals as determined in the United States, the EPA's (Environmental Protection Agency) are emphasized for their endocrine-disrupting effects. The use of Bisphenol A in polibikarbonat material of infants and children is prohibited in Turkey and the European Union. Endocrine disrupting chemicals cause mostly endometriosis, precocious puberty, nervous system disruption, immune system impairment and cancers. EPA screening program focuses on measuring estrogen, testosterone and thyroid hormones (thyroxine and triiodothyronine) for the prevention of endocrine-disrupting chemicals, and gives importance to environmental monitoring.

Key words: Endocrine, disruptor, chemicals, prevention, education

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Peer-review under responsibility of the Sakarya University.

Keywords: Type your keywords here, separated by semicolons ;

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1.Introduction

Endocrine-disrupting chemicals are the chemical substances received externally that changes functioning of endocrine system, causing adverse effects on healthy human or their children (WHO, 2012). DDT (Dichlorodiphenyltrichloroethane), started to be used as pesticide in 1939 has attracted attention due to its negative effects on environment, plants and animals with Silent Spring book of Rachel Carson in 1962 and then, its use was prohibited (Güler Ç, 2004) In a study carried 30 years after in widely used areas of DDT in Australia between 1964-1974 years, DDE (Dichlorodiphenyldichloroethylene), metabolite of DDT is detected in fat tissues of young crocodiles in contact with DDT. Although any change was not detected in the histological inspections carried on gonads and testis of the animals, the authors specified the expectation of changes such as abnormal development in ovaries of female crocodiles, in testis of male crocodiles in different locations and in larger samples (Yoshikane M at al., 2003). In-vivo studies are evidencing that DDT metabolites are displaying cytogenic and estrogenic activity. (Wetterauer B at al, 2012).

Diethylstilbestrol used frequently during 1950s to prevent miscarriage was prohibited twenty years later by determining that it is leading anomalies in reproductive systems of girls (Maeda N. at all, 2013).

Finkelstein JS et al., have shown that estrogen marked radioactively was replaced by mummy cream in patient serum by reporting libido loss, reduction of testis size, slow-down in lengthening beard and development of gynecomastia due to embalming in an undertaker in 1988 (Finkelstein JS et al,1988).

Endocrine disrupter term is first used in 1996 year. EPA (Environmental Protection Agency) has reported that several chemicals are effective on endocrine system and that such substances are received in human body by means of food chain in a report published. The studies carried later determined that these substances may be received into the body by means of skin, respiration tract, and transplacental routes too (WHO,2012; Pintol AM, Carvalho D, 2013).

2. Endocrine system

Hormone generating glands in human body are hypothalamus, pituitary gland, thyroid, parathyroid, suprarenal glands and reproduction glands. Other than these, differentiated cell groups within some organs may also produce hormones. For instance, some hormones are also produced in pancreas, kidneys, fat tissue heart and liver. Development of brain and nerve system, sleep, drinking, growth, immunity, reproduction, adjustment of blood sugar, bone structure is organized by means of hormones (WHO, 2012).

3.Endocrine Disrupting Chemicals

Endocrine disrupting chemicals are determined to disrupt functions of these hormones and thereby leading disruptions on nervous system, immune system, reproduction functions due to negative effect on body functions and leading formations of cancers (breast, endometrium, testis, prostate, thyroid). DDT, diethylstilbestrol and dioxins, phthalates and bisphenol A of recent dates are among endocrine disrupting chemicals researched most in this subject matter.

3.1. Bisphenol A (BPA)

Bisphenol A (BPA) exists in the structure of plastics. Feeding-bottles, water carboys, food storage containers, cola and fruit juice bottles, inner surface of metal boxes as a thin layer to avoid interaction of food products with metal surface. It is also available in teeth repair materials, in the content of fungicides and pesticides and varnish. It is greatly received into the body orally as well as through skin and inhalations with a less proportion. Bisphenol A and its metabolites excreted with urine. It is reported that BPA is available in blood, fat tissue, semen, mother milk, amniotic fluid, placenta, fetus, colostrums, cord blood and saliva in body and that it effects reproduction negatively in girls (Varayoud J at al., 2014; Rochester JR, 2013). In consideration of possible adverse effects, existence of BPA in the structure of polycarbonate materials that may be used by children is prohibited both in European Union and in Turkey.

3.2. Dioxin

Dioxin exists in PVC, plastic materials, chlorine pesticides, herbicides. It accumulates in fat tissue of human. The baby carries dioxin received intrauterine as long as his life. Dioxin is transmitted to hot drinks serviced in plastic cups, hot food products and foods in plastic plates heated in microwave ovens. Dioxin is also transferred to waters sold in pet-bottles with the effect of sun and heat (Wetterauer B et al, 2012). Typical indication of dioxin intoxication is the formation of acnes resulting from chlorine and changes in skin appearance.

3.3. Phthalates exist especially in the structure of plastic and cosmetic products, paints and house cleaning products. It is received orally, via inhalation and skin. Phthalates are proved to have negative effects on fetus development, on reproduction system and pubertal development (Durmaz E, Özmert EN, 2010). EPA is focusing on measurement of estrogen, testosterone and thyroid hormones (thyroxin and triiodothyronine) as screening program in order to be protected from endocrine disrupting chemicals and pays special importance on environmental monitoring. Because, thyroid hormones are effective on growth, reproduction, development and on metabolism and endocrine disrupter chemicals are affecting these hormones at most (EPA, 2014). Things to be done by people to be protected from endocrine disrupting chemicals are abstaining from heating products wrapped or kept in plastic materials especially in microwave ovens and to prefer ceramic dishes, containers instead of plastics. Furthermore breast milk and baby formulas in plastic bottle should be prevented from contact with microwave. The other measures to be taken for protection from endocrine disrupting chemicals are washing of hands of children for possible contact with pesticides after games, avoiding babies to chew plastic products, not to consume fishes with possible contact with toxic chemicals at most three times a week, to prefer small fishes. (Jenkins S et al.,2012).

This topic has been given as lecture to the 2nd year students of Istanbul Faculty of Medicine, in the academic year 2013-2014 in a great classroom with an emphasis on the importance of prevention of endocrine -disrupting chemicals.

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A memória de trabalho no contexto de uma intervenção especializada em Dislexia

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Resumo

O presente artigo refere-se às áreas que a investigação aponta como causais quando o cerne é o desenvolvimento da compreensão da leitura em alunos disléxicos a frequentarem o 3.º ciclo e o ensino secundário. Indo para além de ideias pré-concebidas sobre, por exemplo, a questão da consciência fonológica nas pessoas disléxicas mais velhas e sobre o que verdadeiramente trabalhar no âmbito de uma intervenção especializada, a presente investigação chegou a quatro áreas: precisão, fluência, semântica lexical e – a maior descoberta neste contexto – a memória de trabalho. Estas áreas integram o Programa CLD – Programa para Disléxicos.

Este artigo é parte integrante da Dissertação de Mestrado em Ciências da Educação, Especialização em Educação Especial, apresentada no Centro Regional das Beiras da Universidade Católica Portuguesa, em 2011.

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Peer-review under responsibility of the Sakarya University.

Keywords: Dislexia; compreensão da leitura; causas; memória de trabalho; alunos disléxicos mais velhos.

Abstract

The present article focuses on the areas which research points to as causes that affect the development of reading comprehension in dyslexic students enrolled in the 3rd cycle and secondary school. Going beyond preconceived ideas relative to, for example, the issue of phonological awareness in older dyslexics and what should be dealt with within the scope of specialised intervention, the present research concentrates on four areas: precision, fluency, lexical semantics and – the greatest discovery within this context – working memory. These areas are included in the CLD Programme – Programme for Dyslexics.

This article is an integrant part of the Masters Dissertation in Educational Sciences, Specialisation in Special Education, presented at the Beiras Regional Centre of *Universidade Católica Portuguesa*, in 2011.

Keywords: Dyslexia, reading comprehension; causes; working memory; older dyslexic students.

Introdução

Apesar de crermos, na sequência de diversos estudos, na intervenção pedagógica no âmbito da dislexia em idades mais tardias, convém reter, como escreve Shaywitz (2008), que são muito mais difíceis de remediar as dificuldades de leitura diagnosticadas após o 3.º ano de escolaridade. Tal não invalida a afirmação segundo a qual «nunca é tarde», porque existem, de facto, ganhos – audíveis – em todas as idades, ganhos que o estudo realizado no âmbito da investigação que culminou no CLD – Programa para Disléxicos, permitiu perceber.

O que nos deve preocupar nos alunos disléxicos – mesmo ou sobretudo relativamente aos alunos mais velhos?

Sabendo que, quando falamos de dislexia, estamos a falar de dificuldades de leitura e que a única finalidade da leitura é compreender o que é lido (Davis & Braun, 2010, p. 216, citados por Almeida, 2011), o mesmo é dizer que a leitura não atinge o seu objectivo sem compreensão (Morais, 1997, p. 112, citado por Almeida, 2011), o cerne de uma intervenção na dislexia terá de ser o desenvolvimento da compreensão da leitura. Falando de uma intervenção especializada, a questão central deverá ser o desenvolvimento das áreas que serão a causa ou estarão comprometidas na dislexia e que, consequentemente, comprometem a compreensão da leitura.

Como refere Almeida (2011, citando Shaywitz, 2008), os alunos disléxicos mais velhos, porque se socorrem de uma terceira via de acesso à escrita, poderão apresentar progressos no que respeita à precisão leitora, apesar de manterem uma velocidade de leitura lenta; com a idade, vão sobreativando esta terceira via de acesso à leitura, como compensação das dificuldades que sentem na descodificação, e subativando áreas posteriores de acesso ao material escrito, como é o caso da via que se situa na região occipital-temporal, responsável pela leitura automática.

Por esta razão, Almeida (2011) refere que uma intervenção centrada nas causas pretende desenvolver as áreas que poderão ser a causa das dificuldades de compreensão da leitura dos alunos disléxicos; pretenderá concorrer para a ativação das áreas subativadas, de forma a tornar a descodificação mais rápida, mais suave, diminuindo o esforço. É que a compreensão é o que é importante, mas essa conquista terá de passar pela descodificação (Sim-Sim, 2007, citada por Almeida, 2011).

Áreas causais das dificuldades de compreensão da leitura dos alunos disléxicos. Pressupostos do CLD

Neste artigo, apenas iremos referir-nos a quatro áreas do Programa CLD – *Programa para Disléxicos*. Almeida (2011) fala de uma outra intervenção no contexto deste programa, que é o estudo de música, mais concretamente a aprendizagem de um instrumento; contudo, neste artigo, quisemos centrar-nos numa intervenção possível de ser realizada por qualquer especialista na área da Dislexia (que é o ideal) ou por um especialista em Educação Especial – que não terá, à partida, conhecimentos musicais.

O CLD parte de 24 pressupostos, que justificam a integração das áreas que foram consideradas, no âmbito da investigação realizada, como sendo as áreas causais das dificuldades de compreensão leitora dos alunos disléxicos mais velhos.

.1. Fluência

Snowling e Stackhouse (2008) e Pennington et al. (1990), citados por Almeida (2011), referem que o défice de compreensão da leitura dos alunos disléxicos decorre de dificuldades ao nível da fluência. Não sendo consensual a definição de leitura fluente, esta competência poderá referir-se a uma habilidade para ler textos rapidamente, suavemente, sem esforço e automaticamente, depositando pouca atenção nos mecanismos de leitura, nomeadamente na descodificação (Carvalho, 2011, citada por Almeida, 2011).

Assim sendo, sabíamos que, para melhorar a compreensão da leitura, teríamos de propor um programa que permitisse o desenvolvimento da fluência. O passo seguinte seria perceber como trabalhar a fluência. Gombert (2003, citado por Almeida, 2011) contribuiu para esta resposta: a leitura, inicialmente gerada intencionalmente,

automatiza-se pela repetição. Ou seja, este programa teria de contemplar atividades de repetição de palavras isoladas e de palavras em texto.

.2. Precisão

Para além de decorrer de dificuldades ao nível da fluência, de acordo com Snowling e Stackhouse (2008, citados por Almeida, 2011), o défice de compreensão dos alunos disléxicos decorre também de dificuldades ao nível da precisão de leitura. A precisão da leitura consiste na exatidão com que são transformados os grafemas em fonemas, refere Carvalho (2008, citada por Almeida, 2011), que acrescenta que esta depende essencialmente de competências fonológicas de descodificação. Dizemos essencialmente, porque também depende de outras competências, como é o caso da perceção auditiva e visual, entre outras. A intervenção diária com os nossos alunos centra-se também nestas áreas, mas, no âmbito da presente investigação, quisemos restringir-nos às competências fonológicas, uma vez que (i) constituiu um fator novo o que descobrimos sobre a importância da consciência fonológica ainda e também no caso dos alunos disléxicos mais velhos (Goldstein, Naglieri & DeVries, 2011, citados por Almeida, 2011) e ainda porque (ii), em Portugal, existe já um conjunto grande de oferta para intervir em competências no âmbito da psicomotricidade e da memória auditiva e visual, mesmo no caso dos alunos mais velhos (como é o caso das propostas de Helena Serra, *Cadernos de Reeducação Pedagógica* – por exemplo, Serra & Correia, 2008).

.3. Ampliação do domínio lexical

Quer seja porque têm menos experiências de leitura, quer seja pelo facto de possuírem dificuldades na memória verbal de curto prazo, os alunos disléxicos detêm, por norma, um menor capital lexical comparativamente com os seus pares (Almeida, 2011). Por este facto, uma intervenção a este nível é fundamental, até porque, de acordo com Sim-Sim (2008, citada por Almeida, 2011), um bom nível de leitura resulta também do domínio lexical.

.4. Memória de Trabalho

A nossa compreensão sobre a importância da memória de trabalho no contexto do tema onde nos movemos prende-se, em primeiro lugar, com uma afirmação de Dehn (2008, citado por Almeida, 2011), segundo a qual diversos estudos apontam a memória de trabalho como uma das variáveis que diferenciam um leitor disléxico de um não disléxico.

Sobre o que é a memória de trabalho, Gathercole e Alloway (2009, citados por Almeida, 2011) clarificam que esta se refere à capacidade que nós temos de manter e manipular informação na mente durante curtos períodos de tempo. É um sistema de três componentes de memória (segundo a teoria que reúne maior consenso) interligados que está localizado em diferentes partes do cérebro. O termo «manipulação» será, no fundo, aquilo que distingue a memória de trabalho da memória de curto prazo, como propõe Almeida (2011). Por outro lado, a atenção será o que distingue a memória de trabalho da memória de longo prazo - para além do facto de esta ser potencialmente ilimitada -; na verdade, na memória de longo prazo, armazenamos eventos nos quais participámos ou factos desligados de uma situação específica de aprendizagem, sem focalizarmos a nossa atenção, enquanto a informação armazenada na memória de trabalho exige constante foco da atenção.

.4.1. Relação entre a memória de trabalho e a compreensão da leitura

A compreensão da leitura requer diversas competências que envolvem a memória de trabalho, como explica Dehn (2008, p. 103, citado por Almeida, 2011):

To comprehend text, a reader must store recently decoded text while complex processes construct meaning (De Beni, Borella, & Cazzretti, 2007). As the reading of text progresses, working memory stores the gist of the information from one or more sentences until a meaning-based representation of the text's content, called a *mental model*, is formed. Text comprehension includes several skills and abilities that involve working memory: decoding individual words and accessing their meanings; assembling word meanings into larger meaning units; constructing representations of sentences; linking information across sentences; detecting inconsistencies between

parts of the text; focusing attention on the main ideas; creating visual images; forming new knowledge representations; drawing plausible inferences on the basis of prior knowledge; monitoring the understanding of the text as reading progresses; integrating information from different parts of the text; and integrating information with related long-term memory representations (p. 103).

.4.2. Podemos melhorar a memória de trabalho?

Integrar um programa para desenvolver a memória de trabalho só faria sentido se esta competência pudesse ser melhorada, mesmo no caso dos alunos disléxicos mais velhos, que são o nosso público-alvo.

Aquilo que a investigação nos diz é que (i) a memória de trabalho é exatamente a parte das nossas faculdades intelectuais que é passível de ser desenvolvida (Klingberg, 2009, citado por Almeida, 2011) e que (ii) todo o cérebro responde a mudanças desde sempre e para sempre, ao contrário do que até há não muito mais do que dez anos se cria (Almeida, 2011). Tem é de se exercitar a atividade cerebral (de forma específica): “Use it or lose it!” (Merzenich, n.d., citado por Almeida, 2011).

O CLD-Programa para Disléxicos

Partindo, então, de três das imensas teorias que procuram explicar as dificuldades sentidas pelos alunos disléxicos – teoria do Défice Fonológico, Teoria do Défice de Automatização e Teoria do tempo de permanência da atenção - e assente num conjunto de 24 pressupostos, criámos o *CLD*, um conjunto de programas de intervenção – um dos quais informatizado (o que pretende trabalhar a memória de trabalho), cujo funcionamento testámos ao longo de um ano com cinco alunos disléxicos do 7.º ao 11.º ano, intervenção que partiu de uma avaliação inicial interna, realizada por nós, e de uma avaliação externa, da responsabilidade de um psicólogo educacional, que utilizou testes aferidos para a população em causa, avaliando as áreas causais que iriam ser intervencionadas ao longo de um ano.

No seguimento daquilo que Shaywitz (2008) refere - que o efeito de intervenções específicas aplicadas em crianças disléxicas pode ser verificado após um ano de intervenção -, e comparando os resultados das avaliações iniciais e finais (que obedeceram, estas últimas, aos mesmos procedimentos tidos nas iniciais), constatámos ganhos significativos, alguns muito significativos, nos alunos com quem trabalhamos. O programa não está ainda aferido, mas os pressupostos em que ele assenta assim como estes resultados iniciais impelem-nos a acreditar nele – o passo seguinte, na próxima investigação que iremos iniciar, será o de validação deste programa.

Conclusão

Há um caminho imenso que tem de ser percorrido com os alunos disléxicos, nomeadamente os mais velhos. A presente investigação permitiu-nos perceber que caminho seguir no contexto de uma intervenção especializada, levando-nos a propor que

- (i) as dificuldades dos alunos disléxicos não são ultrapassadas apenas porque ficam mais velhos;
- (ii) a consciência fonológica terá de ser uma área a trabalhar com estes alunos, ao contrário do que se tem afirmado. Os alunos disléxicos mais velhos continuam a necessitar de uma intervenção especializada, sobretudo se esta não tiver ocorrido atempadamente;
- (iii) a **compreensão da leitura** é o que mais nos deverá preocupar, no âmbito de uma intervenção especializada com os alunos disléxicos mais velhos, tendo em conta que a dislexia é uma dificuldade de leitura e que ler é compreender;
- (iv) a **memória de trabalho** deverá ser uma das quatro áreas de intervenção especializada quando o objetivo é melhorar a compreensão da leitura dos alunos disléxicos.

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INTE 2014

A multi-faceted model for assessing collaborate learning in higher education

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Abstract

The paper presents a multi-faceted assessment model developed for a graduate course. The students' final course-grades were derived from two sources: 1- an evolving team-based portfolio that was graded by the team itself, 2- an individual test. The multi-faceted mechanisms of the design (a) provided for a combination of participatory and external assessment, and of formative as well as summative evaluation; (b) presented the students with authentic tasks that required self regulation and high-order thinking; (c) made the students practice giving and getting written peer feedback; (d) addressed potential free-riding; and (e) created inter-dependent learning networks, that required frequent contacts.

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Peer-review under responsibility of the Sakarya University.

Keywords: evaluation; collaborative learning; complexity; higher education; portfolio

1. Introduction

Collaborative or team-based projects become more popular in both secondary and post-secondary classrooms. However, constructing effective evaluation tools can be a daunting task. (Gueldenzoph and May, 2002).

Why is assessment of collaborative projects such a daunting task?

Answers can be found in the literature dealing with the evaluation of complex enterprises.

Pawson (2004), for example, described complex projects as ones that consist of a chain of steps which is often not linear, and involves negotiation and feedback at each stage; are prone to modification as they are implemented; and change through learning as stakeholders come to understand them. This description can easily be applied to team-based projects; so can also the following one: "...parts have causal implications for the whole, interactions among parts have causal implications for the whole, parts have causal implications for each other, and the whole has causal implications for parts" (Byrne, 2013: 218)

Conceptualizing a team-based project as a complex enterprise offers insight into why evaluating collaborate learning enterprises is a challenging task and why traditional tools fail to produce satisfactory assessments.

Enterprises that include multiple diverse components, are referred to as complicated; when characterized by fluidity and uncertainty, recursive causality, disproportionate relationships and emergent outcomes, they are called complex (Glouberman and Zimmerman, 2002).

Attempts to cope with challenges of evaluating complicated and complex enterprises are continuously yielding creative notions and approaches (s.f. in Sever, 2012), mostly based on the understanding that moving from linear models and positivistic evaluations to qualitative evaluations and non-linear models is required (Barnes, Matka and Sullivan, 2003).

A classical approach to collaborate learning is the cooperative learning approach. Its application, says Sharan (2010), may produce processes that are more complicated than first perceived. The constant evolution of cooperative learning, he warns, can be threatening and teachers may become confused by it.

Cooperative learning structures positive interdependence by having students work in groups to complete tasks collectively toward academic goals (Slavin, 1990). Unlike individual learning, which can be competitive in nature, students learning cooperatively capitalize on one another's resources and skills. Successful cooperative learning tasks are described as intellectually demanding, creative, open-ended, and involve higher order thinking tasks (Ross and Smyth, 1995). In such tasks, individuals must know exactly what their responsibilities are and be accountable to the group in order to reach their goal. All group members must be involved and each member must have a task that they are responsible for, which cannot be completed by any other group member.

When cooperative learning is successfully incorporated, each group member has a task/ role and believes they are responsible for their learning and that of their group; members promote each other's success, assist one another with understanding and completion of assignments; "free riding" is eliminated by individual and group accountability (each student demonstrates mastery of the content being studied, each student is accountable for their learning and work; social skills are developed (i.e. effective communication, interpersonal and group skills) that are vital for effective cooperative learning; and groups assess their effectiveness and decide how it can be improved (Brown and Ciuffetelli, 2009).

A number of cooperative learning techniques are available. Some, like reciprocal teaching, apply student pairing in which partners take turns reading, asking questions of each other, receiving immediate feedback. Doing so, students use meta-cognitive techniques such as clarifying, predicting and summarizing. Other techniques use small groups of four or five students, among them STAD, for example, where students are placed in small teams and are graded on the team's collaborate performance on tests, although the tests are taken individually.

In addition to, or in place of external evaluation (e.g. on tests), team-based projects may use participatory evaluation tools, such as intra-group peer evaluations and self evaluation.

Intra-group peer evaluations used for performance appraisal are becoming an integral part of today's team-based organizations. Teams with peer evaluations have been found to have higher levels of workload sharing, voice, cooperation, performance, and member satisfaction than teams that relied on external evaluations (Erez et.al (2002) . However, the research on peer-evaluations' validity in a team context is limited and some findings suggest that they can be influenced by rating bias (May and Gueldenzoph, 2006).

Self-evaluation, defined as students judging the quality of their work based on evidence and explicit criteria, is usually applied as a low-stakes assessment, seen as a potentially powerful technique because of its impact on student performance through enhanced self-efficacy and increased intrinsic motivation. Evidence about the positive effect of self-evaluation on student performance is particularly convincing for difficult tasks (Maehr and Stallings, 1972).

Bearing in mind all the above, a model has been constructed that (a) makes the subtle complexity of collaborate learning visible, by welding together (with adaptations) several cooperative learning techniques into a complicated and complex team-based learning task, and (b) builds into it a mixed-methods evaluation structure that aims to cope with the complexity of that task. The framework chosen for the team-based collaborate learning was an evolving portfolio, which also served as a platform on which several assessment/evaluation mechanisms were operated.

The model and the experiment which applied it in a graduate course are presented henceforth.

2. The experiment

46 students took a graduate course titled "applied evaluation in view of future education". The course examined the place of evaluation in future education– as a professional discipline on the one hand and as a way of thinking on the other hand.

The course requirements were: presence at lessons; mandatory weekly reading; constructing an evolving team-based portfolio according to specific instructions, presenting it in an exhibition and taking a final test.

The course's staff included a lecturer and an assistant. The teacher's direct involvement was mainly in the classroom, while remaining in the shadows of the team-based portfolio and refraining from active involvement in its processes. Consulting the teacher's assistant during the preparation of the portfolios was recommended, but not mandatory.

A student's final course grade was based on two sources: the test and the portfolio.

2.1. The test

After the course ended, the students took an individual open-book test in class. The test was individual and covered the full course - its lessons as well as the mandatory bibliography. It consisted of four parts, each offered choice between 2-4 questions, and required high order thinking. Taking the test was conditional on submission of the portfolio.

2.2. The team-based portfolio

A learning-portfolio is a collection of materials a student (here: a team of students) produces and selects to document, summarize, and highlight his/her growth, experiences and strengths (Smith and Tillema, 2008).

2.2.1 "Rules of the game"(Instructions given to the student at the beginning of the course.)

The students group into teams of 4-6 members (by their own choice).

Each team constructs an evolving portfolio, which contains the following components:

- A name/title of the portfolio
- 12 lesson-based compartments – one for each lesson of the course:
- Evaluation
 - A list of the team's criteria for evaluating the portfolio.
 - Documentation of the meeting/s in which these criteria were constructed, negotiated and agreed upon.
 - A verbal assessment of the portfolio on each of the criteria, by each team member - explained and justified.
 - The team's assessment of the portfolio, on each of the criteria and a final grade for the portfolio as a whole. Team members can add a verbal reservation to assessments of any criterion, but the final score of the portfolio must be consensual, signed by each member of the team (- only a score that got full consensus can be submitted.)

At the 11th lesson, all portfolios will be presented at an exhibition, in a format similar to poster-sessions in conferences. Each team will have its own "stand", where the portfolio will be open for review and a notebook for feedback from members of other teams will be posted on the stand. A rotating representative of the team will be present at the stand, available for explanations and dialogue with visitors, while the other members (taking turns) will visit the other portfolios.

The final portfolio (after corrections, if necessary) will be submitted by the last (i.e. 14th) lesson of the course (to enable establishment of eligibility for taking the final test)

2.2.2 Constructing the lesson-related compartments (instructions)

- Each compartment must contain at least one *item* for this specific lesson.
- Each *item* will be submitted and signed by one of the team- members and will include (a) a *supplement/extension* to this lesson, (b) a justification of its relevance, and (c) written feedback from another team member (with his/her signature).
- Steps:
 - a) "*Supplement/extension*" - find some relevant material from external sources (such as: newspapers, radio, TV etc; from an evaluation conducted in your own workplace; an article which you suggests to add to the course's bibliography for ; an interview with a professional evaluator; an evaluation report or evaluation plan that might illuminate some aspect of this lesson; etc.)
 - b) *Justification/reasoning* - add a written explanation why this "supplement" is relevant for this specific lesson and its bibliographical item : what does it illuminate, what aspect of the lesson does it connect to, etc.
 - c) *Feedback* - Present your item to another member of the team and get his/her written feedback. Feedback must be fair, courteous and balanced: addressing both strengths and weaknesses of the item.
- A team member can submit a certain item only to one team member, and can only give feedback to one other member (no "swopping" within a pair).
- Construction of the 12 compartments must be fairly distributed among the team-members (according to the pre-designed matrix for teams of your size)

Table 1: Example of a pre-designed generic matrix for a six-member team [in cells – lesson numbers]

Submitter Feedback provider	F	E	D	C	B	A	No. of feedbacks provided
A	VII	X	II				3
B	XII	III				I	3
C	IV				II	VI	3
D				III	VII	XIII	3
E			IV	VIII	VI		3
F		V	IX	I			3
No. of feedbacks received	3	3	3	3	3	3	

The tables 2a-2c below explicate the model's major facets and their rationale/purpose. Some of the facets are marked by "L" because they address learning aspects of the model. Their purpose is to foster various characteristics of collaborative/cooperative learning, high-order thinking and self efficacy. Other facets (marked by "E") induce aspects of evaluation, such as: assessment for learning, low-stakes formative evaluation, high-stakes summative evaluation.

Table 2a: the combination of Test + portfolio (100% of final grade)

Facet and nature of tool	Purpose/ rationale (L=learning, E=evaluation)
Mixed-methods measurement of achievements	Fractal teaching: studying a variety of alternative evaluation tools in the course, being evaluated by them "for real"

Table 2b: the Test (weight =50% of final grade; or 80% if portfolio weighs only 20%)

Facet and nature of tool	Purpose/ rationale (L=learning, E=evaluation)
Individual	E : balance the student's dependence on team members contributions;
External evaluation (by teacher)	E: Balance biases of students' self evaluation of their portfolio
open-book test	E+L: Less stress and anxiety (Theophilides and Dionysiou, 1996; Theophilides and Koutselini, 2000).), encourage HOT instead of memorizing (Agarwal et. al., 2008`)
Eligibility for test- taking depends on submission of the portfolio	L+E : (a)preparation for test is inherent in the preparation of the evolving portfolio; (b)deadline for the portfolio

Table 2c: the portfolio component (weight =50% of final grade, or 20% if inflated)

Facet and nature of tool	purpose/ rationale (L=learning, E=evaluation)
Team-based	L: (a) develop teamwork skills; (b) collaborative learning; require HOT (Gueldenzoph and May, 2002).
Evolving with the course	L: create continuous involvement and active learning of the students along the course;
adding course- related supplements for each lesson	L: authentic task ; knowledge-building; creativity, personal associations , personal meaning of the lesson; self efficacy
Justification of item's relevance	L: Explication of personal line of association; HOT (analysis and synthesis), meta-cognition
Choice of best items	E: presenting strengths (Birenbaum, 1997)
Portfolio exhibition (all teams) –	E: an alternative evaluation tool; external feedback (

within the course only	from members of other teams) before final submission
consensus mandatory;	L: Collaborative learning ; negotiating ;interactions/networking
Pre-designed generic matrix of item submission	E+L: Equality in division of labor in the team; no free-riding; Meeting the complicated "rules of the game" is almost impossible if not pre-planned
Giving and getting feedback	E: Assessment for learning, formative evaluation; Experience feedback under conditions of symmetry
Signing each submission/ feedback	E: Making everyone's contribution visible. Avoiding free-riding
Teams name their portfolio	E: Extracting the essence of what the complex enterprise as a whole meant for the team
Team evaluates its own portfolio as a whole	E: participatory evaluation; discover the complexity of assessing complex tasks; combines assessment for learning with high stakes evaluation of achievements ; complex product
Team's score never replaced by teacher's score; if inflated, it's weight is lowered (from 50% to 20% of final score)	E: students empowered, with restriction of the benefit of inflating the score
Assessment based on criteria which were negotiated, defined, documented and unanimously agreed upon within the team	L+E: self regulation (criteria not prescribed by authority); reaching consensus; experience with setting criteria for assessment,
Can be amended after getting external feedback at the exhibition	E: Formative evaluation
teacher's hypothetical assessment of portfolio	E: subtle standard –setting for high stakes evaluation - coping with students' positive bias (i.e. toward inflating final score)

3. Findings

The case-study method was chosen for examining the experiment, in accord with Yin's (2013) comment that *"Many evaluations [...] portray 'complexity' as an important feature justifying the use of case studies"* (op.cit: 329)

The many facets of the complex collaborate learning experiment will henceforth be described in details following Yin's (2013) reference to *"the importance of describing the actual features associated with the labelling of an intervention as 'complex', rather than relying on the use of the label alone"* (Yin, 2013; 329)

The case study explored three questions :

- Feasibility of using the model in an academic course : To what extent was the model materialized in the reality of the course? Was it possible to keep its "rules of the game"?
- Uniqueness: What, if any, tacit facets of the model shaped the students' experience?
- Challenges: What, if any, problems did the model induce in the course?

3.1. Feasibility: To what extent did the model materialize in the reality of the course? Was it possible to keep its "rules of the game"?

The students grouped into 10 teams of their choice, with 3-6 members in each.

10 team-based portfolios were submitted. Each contained all the required components. The scores the teams gave to their portfolios were accepted for 50% of the students' final score.

All portfolios were presented at the exhibition on the 11th lesson and finally submitted by the last lesson; all students were eligible for taking the test .

Adherence to the pre-designed generic matrices for the division of items was kept by most but not by all of the teams. Some of the teams made good use of their own pre-designed matrix to divide among them in advance the lessons for which each of them was responsible as "submitter" (provider of items) and those for which he/she would serve as feedback providers. A few teams ignored their matrix. They assembled a pool of items which

were freely collected during the course, then, at some stage - before the exhibition - they chose from the pool those items which seemed most appropriate for the portfolio. Although all teams managed to submit the required number of items in total, a team's departure from its pre-designed matrix produced incomplete networking, unequal division of the 12 lessons among the team members (e.g. two of the members were detached from each other in terms of submission-feedback) and unequal processing of the lessons. Such diversions might be avoided if monitoring of adherence to the matrices, by the staff, is added to the model.

The adapted poster-session paradigm was applied in the exhibition as planned, but the feedback provided in it was less meaningful than expected.

Each team presented its portfolio on its stand and left one of the team (in rotation) at the stand while the rest of the team visited the other teams' stands.

The exhibition was taken seriously in terms of investment in the presentation of the portfolios, and turned out to be quite a happening. In conferences, genuine feedback is hardly expected of the visitors at poster sessions; the same also happened in our exhibition, despite the expectations inherent in the model.

The feedback the portfolios got from other teams in the exhibition was superficial, mostly compliments and general sayings: This might reflect the limitations of inviting feedback in a context of symmetry where the quality of another team's product has no bearing on one's own final grade: The portfolio's "rules of the game" created interdependence within teams, which made for an atmosphere of collaboration; there was little to gain, and much to lose, from internal competition. The idea of competition did however arise when preparing for the exhibition – vis-à-vis other teams.

The superficial feedback to the portfolios could however also result from the time boundaries of the lesson's framework. If each student wanted to see all portfolios of the nine other teams, time for delving into each portfolio was indeed too short.

3.2. Uniqueness: What, if any, tacit facets of the model shaped the students' experience?

Many of the model's facets emerged beautifully in the students' reflections and in teams' documentation of their (mandatory) team-meetings: the evolving nature of collaborative learning; vagueness, uncertainty; anarchy and emergence; interdependence and responsibility; feedback and interdependence; threshold setting; the novelty of providing feedback under conditions of symmetry; active learning, task-oriented (for feedback); inherent preparation for the final test; knowledge-building; developing team-work skills; assessment for learning; self regulation, self efficacy; attractive, intriguing, arousing curiosity; lasting effect of the collaborative learning. All these facets emerged beautifully in the students' reflections and in teams' documentation of their (mandatory) team-meetings. Since presenting them here would require much more space than this paper allows, here is but one example of a citation in which the evolving nature of collaborative learning is echoed:

"The Symphony That Never Ends" [=the portfolio's title] - is a continuous process of a team that gathered for a short period, acted with inter-personal interactions, attended classes, searched for additional reading material, recommended it to peers and got feedback from them.

The process has not ended, actually this is just the beginning, each team member departs with the feeling that learning hasn't ended here [...] Kant developed the idea that a teacher mustn't teach thoughts but teach how to think. This is the feeling with which each of us team members has concluded the course and the team work process."

3.3. Challenges: What difficulties/problems, arouse during the course?

Some of the students (all educators themselves) felt threatened by the complexity produced by the "rules of the game"; Or being expected to rely on their own resources for creating added-value to the course (by providing "extensions"); Or for giving feedback – even criticism – to their peers, especially when they felt they were not knowledgeable enough on the subject.

Several of the model's mechanism (e.g. interdependence and the requirement for transparent division of labour, and for documented meetings in which criteria were established) made it necessary for them to have intensive interactions with their team-members and required coordinated cooperation between people who were strangers to each other. It was technically quite problematic for them, because their collaborative work relied on face-to-

face meetings, which were difficult to coordinate because each member lived elsewhere and only came to Jerusalem (the city of the university) on the day of the course.

This difficulty was felt even in teams that did use some basic ICT tools.

4. Discussion

The model presented in this paper offers a mixed methods evaluation tool, combining not only two techniques but also their different paradigms: one positivistic (a test), the other constructivist (a portfolio)

Its positivistic paradigm and evaluation method rest on the infrastructure of a formally structured *cooperative learning* experience (Slavin, 1990), here applied to an entire graduate course. Unlike classic cooperative learning techniques, which organize the classroom activities in an alternative format where the teacher's role changes from giving information to facilitating students' learning, the present model organizes cooperative learning beyond the classroom – while regular lessons are given by the teacher in the classroom

The present model is coherent with existing recommendations for conditions needed for effective evaluation of collaborate learning (Gueldenzoph and May, 2002) but adapts them to the complexity of the team-based project by certain modifications: (a) a *foundation that supports collaborative evaluation* was formally created by the interdependence enforced by the "rules of the game". (b) *Specific criteria* for assessment of products are articulated, by the students themselves (not by the teacher of the course). (c) *Ensuring honest student participation* was achieved mainly by the mechanism of transparent accountability (making everyone sign each product); and also by setting the condition of "not exceeding the teacher's score by more than 10 points". (d) *Formative feedback* was obligatory all along the course – but provided by team-mates and not by the teacher. Feedback from the teacher's assistance was available for students who chose to consult her, but not mandatory. Summative feedback at the end, actually high stakes evaluation, was provided, in more than one way: one was basically participatory - the teams' final score on their own portfolio, a score that had real meaning for their final course grade; another was external (by the teacher) – evaluation of the final test, which reflected to a meaningful degree the individual benefits from their collaborative learning. The collaborate process' assessment was inherent in the reflections which the team-members were required to include in their portfolio.

The multi-faceted mechanisms of the model's design also provided for a combination of participatory and external assessment, and of formative as well as summative evaluation; presented the students with authentic tasks that require self regulation and high-order thinking; made the students practice giving and getting written peer feedback; prevented potential free-riding; and created interdependent networks, that required collaboration and frequent contacts.

The findings support the feasibility of using an evaluation model based on the conceptualization of a team-based project through the lenses of complexity theory; they also show its added value for evaluating cooperative learning enterprises by the quality of their products - provided that mechanisms exist that make the quality of products dependant on quality processes and shield the team from submitting unworthy products.

Today's technology offers web-based portfolios and enables much easier team-work than was conducted in that course. Technology can be used to control and monitor interactions, to regulate tasks, rules, and roles, and to mediate the acquisition of new knowledge. Virtual Classrooms (i.e. geographically distributed sites linked by audio-visual network connections), Chat, Discussion threads, Application sharing (e.g. spreadsheet on another colleague's screen across a network link for the purpose of collaboration); Collaborative Learning in Virtual Worlds that takes advantage of unique features offered by virtual world spaces - such as the ability to record and map the flow of ideas, use 3D models and virtual worlds mind mapping tools.

All these - and more – options suggest that the findings of the first experimentation with the model point at the model's potential for augmented feasibility and effectiveness if it is based on optimal use of modern technology.

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INTE 2014

A physics exhibit to show the effect of the aerosol in the atmosphere on electromagnetic wave propagation

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Abstract

In this paper it is explained the construction and utility of a didactic exhibit about the effect of aerosol in atmosphere on electromagnetic wave propagation. The exhibit is composed by a lamp simulating the Sun, a Plexiglas case (the atmosphere), white or black panels (surface albedo), a combustion chamber to supply aerosol inside the case and other equipments. There are temperature and relative humidity of air sensors and 5 light sensors to measure direct and scattered light. It is possible to measure the cooling effect of aerosol inside the case and the increasing in scattered light.

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Peer-review under responsibility of the Sakarya University.

Keywords: aerosol; didactic exhibit; scattered light; temperature; electromagnetic wave propagation

Introduction and context

The influence of the aerosol in the atmosphere is very important in all climate models. It's well known that if carbon dioxide increases in the atmosphere, the temperature rises up. On the contrary the presence of aerosol in the atmosphere has a cooling effect: it increases the reflection of the Sun incident light in outer space.

There are different types of aerosol, which differ mostly in the size of the particles. The source of aerosol could be natural or artificial. An example of natural aerosol in the atmosphere is the Sahara Desert sand over the Mediterranean Sea. An example of artificial aerosol is the industrial waste dispersed in the atmosphere or the solid particles ejected by the exhaust pipe of motor-vehicles.

An indirect effect on the atmosphere is cloud formation due to the aerosol, that reduces solar irradiation.

It was built a small chamber to analyze the effect of aerosol in a didactic contest (see photo in figure 1). The chamber can be monitored and controlled by the user. The exhibit allows to measure the amount of scattered light, variations in air temperature and the amount of relative humidity in the chamber. A lamp, in upper side of the chamber, simulates the irradiation of the Sun. Aerosol particles are produced in a controlled combustion chamber in which it is possible to burn little pieces of paper. The aerosol smoke is cooled before entering into the atmosphere chamber. It is possible to increase the amount of humidity in the chamber with a water heater. In the bottom of the atmosphere chamber there are 2 panels to simulate superficial albedo, one side is white like ice and land, the other side is black like sea.

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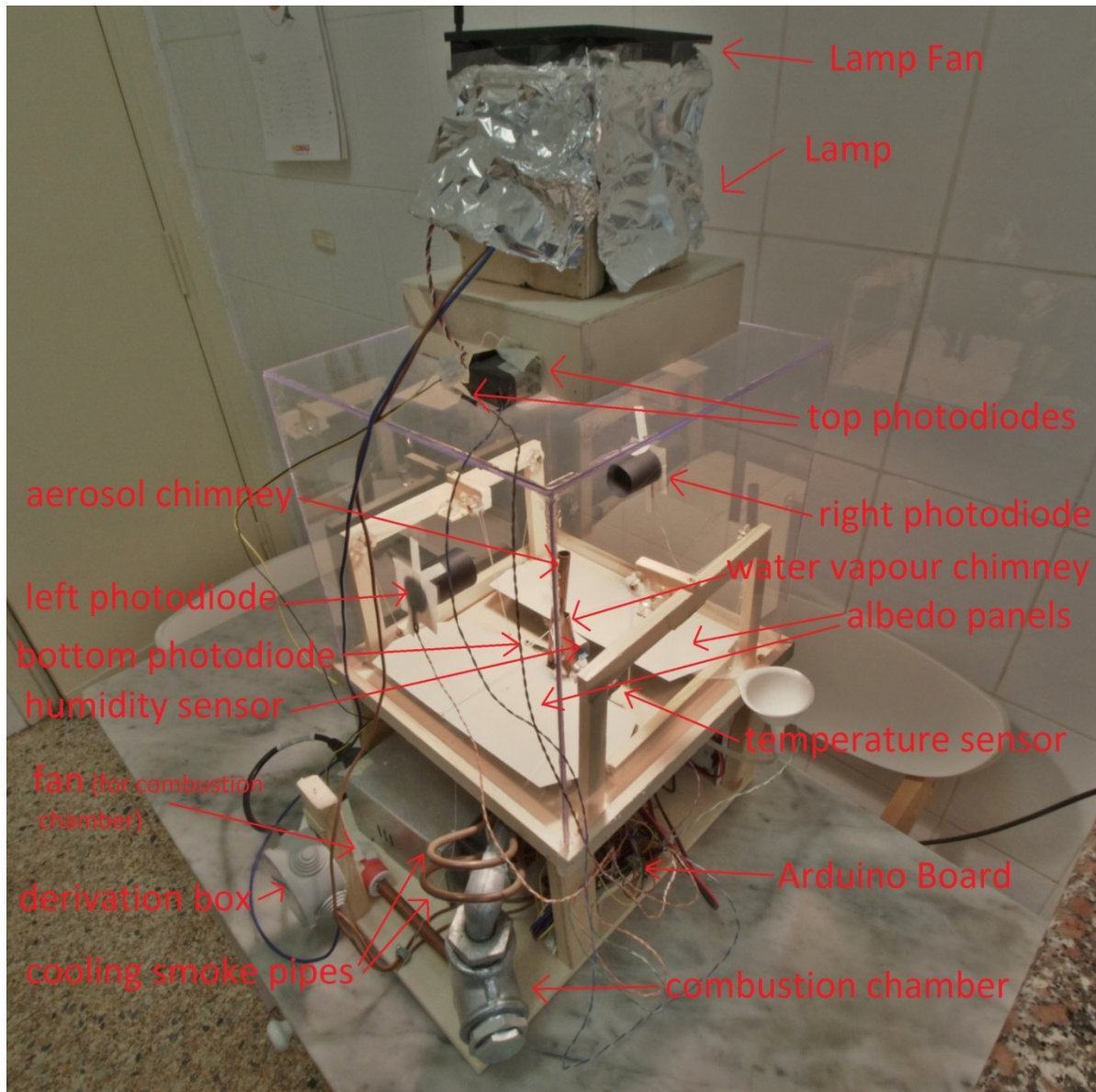


Fig. 1 - Photo of the exhibit. Red labels indicate all equipment and sensors.

General description

1. Description of used equipment

The principal component of the exhibit is a Plexiglas case (the atmosphere chamber). The shape of the case is a cube with 30 cm edge length. The case is putted on a bottom plane of poplar plywood. The air in the case represents the Earth atmosphere.

In the upper side of the case there is a common lamp with E27 connection. A 12 cm fan cools air near the lamp to protect Plexiglas case by overheating. The lamp chosen is a “spot lamp”. This type of lamp has a particular coating inside the bulb to concentrate illumination in the lower part. The spectrum of artificial light is slightly different from Sun Spectrum that is similar to a black body at the temperature of 5900 K. The temperature of the filament of the lamp is between 1500 K and 2700 K, so the spectrum is similar to Sun with more light in higher wavelength i.e. infrared and minor in shorter wavelength i.e. ultraviolet. The illumination is more similar to an exoplanet that orbits around a red dwarf star.

In the bottom part of the case there are 2 panels to adjust surface albedo (see figure 2). Each panel is made gluing a white paperboard with a black paperboard together. In the middle of them there is also a long skewer between the two paperboards to rotate each panel. The white side of the panels simulates the ice on the Earth

surface, on the contrary the black side simulates the sea. To move up and down and to rotate the panels, there are 4 ropes with some pulleys.

To uplift the panels: 2 ropes are rolled up around a “reel of thread” by an electric motor and a gearbox reduction placed just below the floor of the plexiglass case (see photo in figure 3).

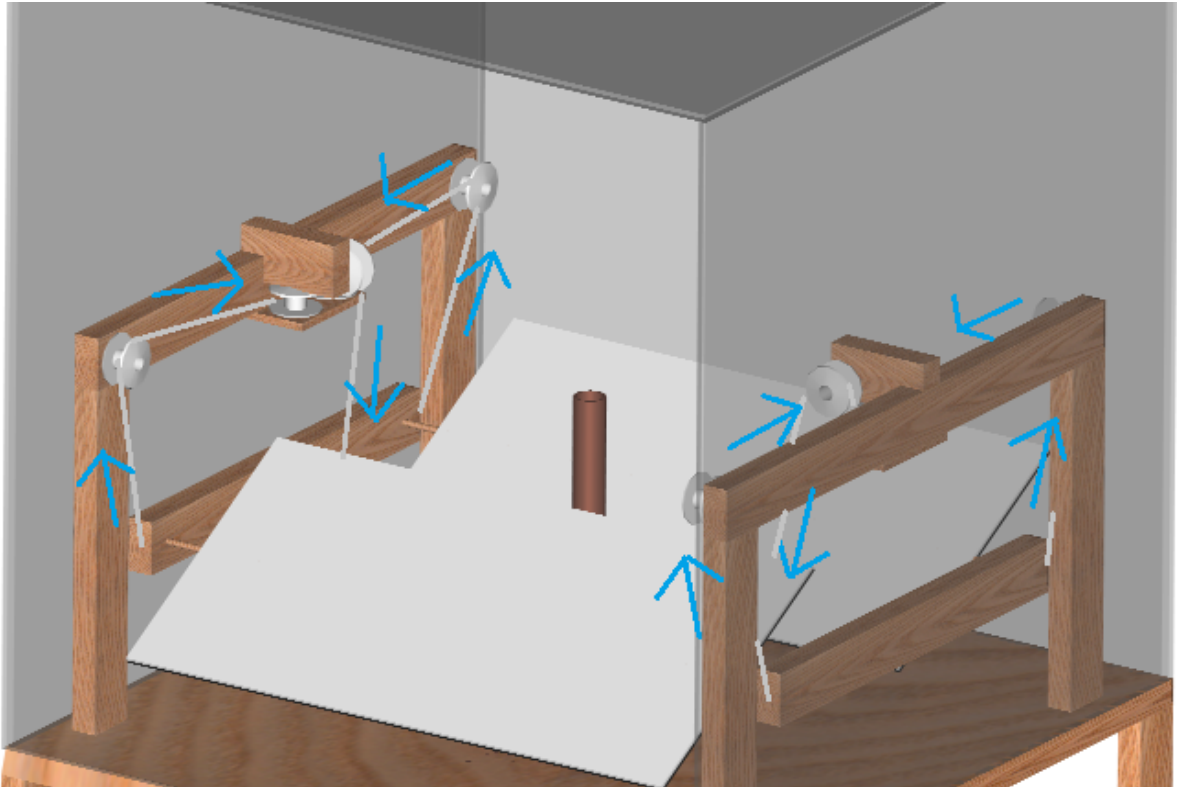


Fig. 2 – A detail of the 3D project for the moving system of albedo panels. The arrows indicate the moving direction of ropes to uplift panels.

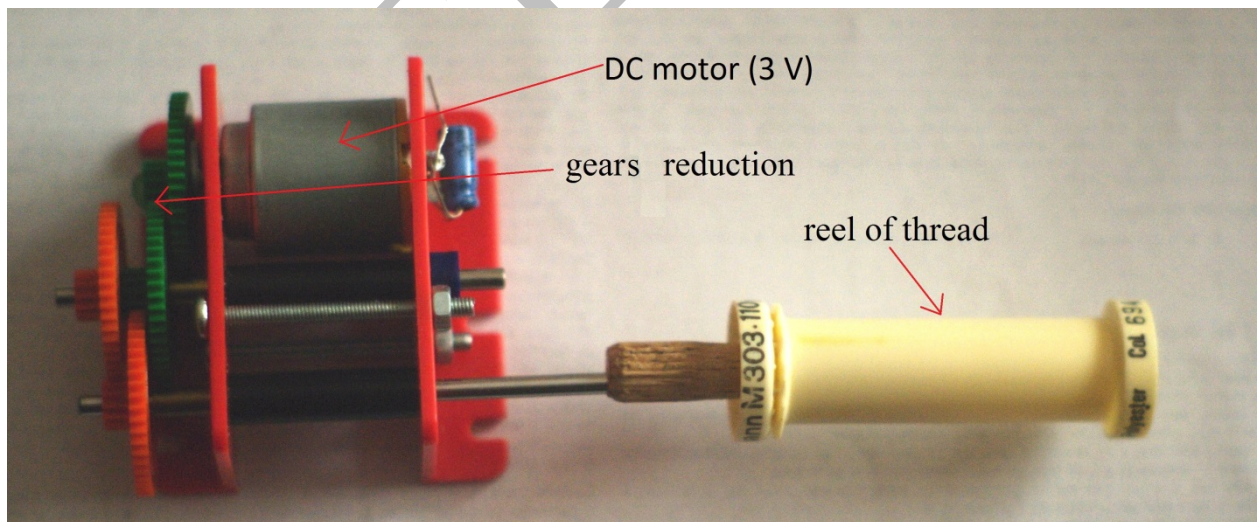


Fig. 3 - Photo of the motor and gearbox reduction of "albedo lift", before the installation into the exhibit. The “reel of thread” to roll the ropes is visible in the photo.

This motor is controlled by the integrated circuit NJM2675D, that is a power amplifier H bridge allowing the motor to run in each direction (see scheme in figure 4).

The lift system is commanded by a computer. This computer is connected with the development board Arduino Duemilanove with serial communication (USB with a virtual serial port). Arduino generates the correct

sequence to uplift the panels; then it waits 15 seconds in which panels must be rotated manually with 2 another ropes; then the Arduino generates the different sequence to get down the lift system.

To produce aerosol, there is a combustion chamber below the floor of the plexiglass case. The horizontal position of the combustion chamber is shifted out from plexiglass case to avoid dangerous risks of flames or overheating. The combustion chamber is made by using a hydraulic tee threaded adaptor. The bottom connector is closed by a nut, the horizontal connection is utilized to fill fuel (it could be closed screwing a nut after the paper burn). The top connection is connected with 2 straight copper pipes to the inner part of the Plexiglas case, which are the chimney of the combustion chamber. The adaptor has been drilled down left to connect a pipe of 1 cm of diameter to pump air into the combustion chamber. The external end of the pipe is connected with a 2,5 cm x 2,5 cm fan.

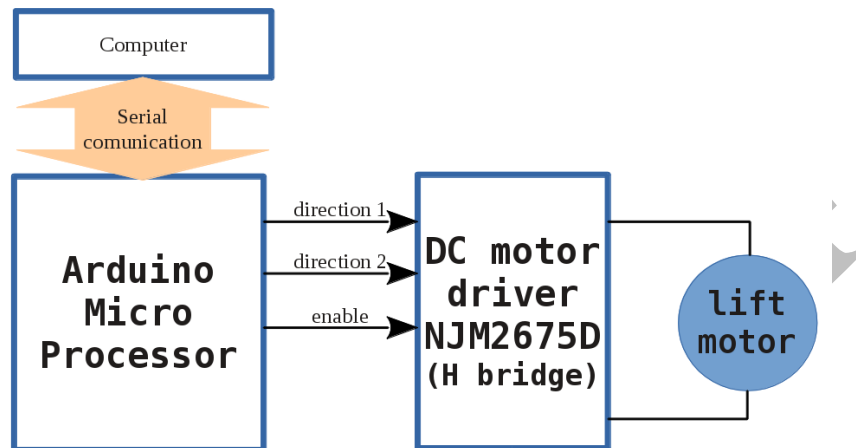


Fig. 4 - Scheme of the motor control system.

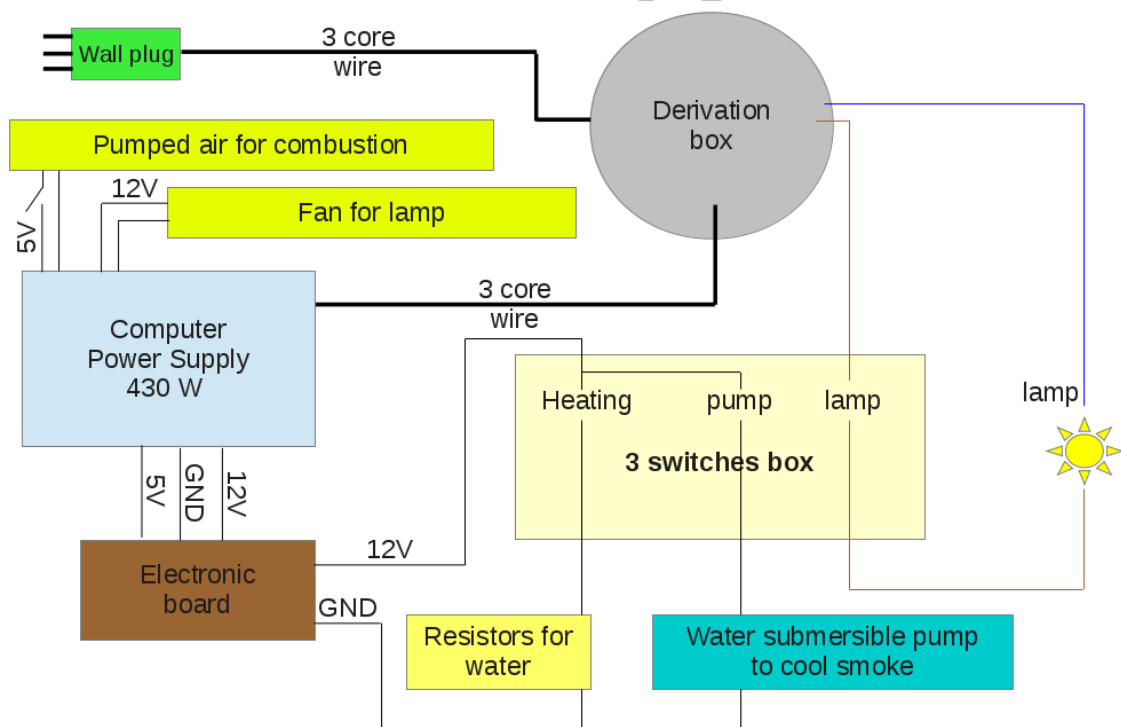


Fig. 5 - Electrical scheme of all equipment.

Little pieces of paper are used like fuel. A match is used to ignite the fire. Switching off the fan, it is possible to stop the combustion. The aerosol obtained by this combustion is similar to that one produced in a forest fire.

Around the horizontal pipe of the chimney there are 4 flexible copper pipes to cool the smoke. In these pipes flows pumped cool water, taken from a glass jar provided with a submersible pump. The pump is powered with

12 V electric tension. The jar is filled with a mix of water and ice. The pump gets water from its lower part, so the ice will not be sucked.

The cooling of the smoke is important to not change the temperature in the Plexiglas case. The pipes were chosen of copper, as this material has a high thermic transfer coefficient.

Below the floor of the case there is another glass jar to boil water for increasing water vapor in the atmosphere chamber. In the jar there are 2 electric resistors to evaporate water. The resistors are 1,8 Ohm and 2,2 Ohm resistance and power of 25 Watt. They are connected in series to a power supply of 12V. The water vapor is introduced in the upper chamber by a copper pipe connected with the lid of the jar.

An electrical scheme of all equipment is visible in figure 5. To power all equipment (except lamp) is used a "computer ATX power supply" of 350 Watt. A lower power supply is enough for this exhibit, but nowadays the power supply used is the minimum for a typical computer. The power supply is switched on, connecting the green cable with a black cable on the 24 pin Molex connector, which usually goes to the motherboard. This connection simulates the Power On Command from the motherboard to the power supply. The lamp is powered directly by 220 V AC tension and is turned ON and OFF by a switch.

A fuse is put inside a derivation box to protect all electric components from eventually short-circuits. A 3core wire with an electrical plug 220 V (starting from the derivation box) powers all the exhibit.

.2. Sensors to monitor the atmosphere in the chamber

To monitor the propagation of the electromagnetic waves into the atmosphere chamber, it is possible to use photodetectors.

In this exhibit, 5 photodiodes SFH206K have been chosen to detect the intensity of light. The model of these photodiodes has an active area of 7mm^2 (2,65 mm x 2,65 mm), a half intensity response angle of 60° and a spectral range of sensitivity visible and near infrared.

2 photodiodes are put at top of the atmosphere chamber to measure intensity of reflected light upward. One of them has a UV/IR cut filter that passes visible light from 420 nm to 680 nm. The filter and its photodiode are putted into a black paperboard box to stop exterior light. The other top photodiode detects light in the full band of photodetector (from 400 nm to 1100 nm). It is attached directly at the external face of the Plexiglas with adhesive tape. That is possible as for this particular photodiode the sensitive face is flat.

They simulate 2 sensors putted on a satellite looking down the Earth atmosphere. 2 photodiodes are attached, in the same way, on the left and right side of the atmosphere chamber to measure the light scattered by 90° relative to the line of propagation. Due to the large angle of view of the photodiode it is necessary to put a black paperboard tube with a diameter of 3cm and a length of 5 cm to reduce acceptance angle.

One photodiode is attached with hot glue on the bottom of the chamber to see direct light. It simulates a sensor putted on the Earth surface.

A sensor LM35 is used to measure the temperature of the atmosphere chamber. It is putted on the bottom of the atmosphere chamber. The integrated circuit LM35 has an output voltage linearly proportional to the temperature. The proportional constant is typically 10 mV every Celsius degree. LM35 does not require a calibration. It is calibrated in production process at wafer level. This sensor can be powered by +4 V to 30 V.

A digital sensor RHT01 is used to measure the relative humidity of the atmosphere in the chamber. A second measure of the temperature of the atmosphere in the chamber can be obtained by the same sensor (RHT01).

RHT01 sensor operates in a range from 20% to 90 % relative humidity and a range from 0° to 50° Celsius temperature. Its accuracy is 5% RH for humidity and 2°C for temperature. Its power's voltage should be from 3.3V to 6V. The RHT01 sends data by a serial communication with "MaxDetect 1-wire" protocol.

In this exhibit a 5V tension is used to power the LM35 and the RHT01 sensors.

.3. Data Acquisition System

All measures are stored in a PC with a simple data acquisition system. Data transfer is made in 2 steps. In the first step measures are acquired in the Arduino microcontroller board. In the second step data are sent to the computer, to be recorded in a file of a storage disk. The 5 photodiodes and analog output of LM35 IC are connected directly to analog pins of Arduino board. The microcontroller ATMEGA328, in the Arduino Duemilanove, has a 10-bit successive approximation analog-to-digital converter. The analog-to-digital converter is connected to a 6-channel analog multiplexer, which allows 6 analog inputs. The AREF (analog reference) pin of Arduino allows to change the maximum tension of the analog-to-digital converter: it is possible to use a voltage less than 5V to obtain higher sensitivity conversions. In this exhibit a 2 resistances divider is used to

generate the analog reference voltage for Analog-to-digital converter. The resistances are 1 KOhm and 8.2 KOhm and the reference voltage is 0,54 V with 5,00 V input tension.

The digital pin of the RHT01 sensor is connected to the digital pin 4 of the Arduino board (in the Arduino setup, this pin is configured as a digital input). The values of RHT01 are read by the library released from the producer.

The same Arduino board controls the motor of the moving system of albedo panels. During this process, the acquisition of measures is pausing.

The Arduino program written for the exhibit reads a character from serial communication with PC. This character is the command to move “albedo lift” (“l”) or to read sensors (“o”). The computer waits for 2 seconds. If the user has typed a character on to the keyboard in this time, the program sends a command “l” to Arduino, else it sends the command “o”. Data received from Arduino are recorded by the computer in a file. This file is plotted every 2 seconds by Gnuplot program with a script.

A run of measures taken by the exhibit

One or two hours before using the exhibit, it is necessary to switch on the lamp, which warms the air in the atmosphere chamber.

In this run, water vapor is not added in the chamber. Some ice cubes are putted in the pump water glass. The acquisition of data taken in 3 hours, 8 minutes and 19 seconds are reported in the graph in figure 6. A spreadsheet program can be used to analyze data. The calculated values are reported in table 1. All the values are the mean of time series in a specific range. The errors of the values are the standard deviations of the same series. If the standard deviation is smaller than the instrumental accuracy, the accuracy is chosen. All values are calculated with 2 different albedos (black and white), both of them are measured without aerosol and with aerosol.

Table 1. The mean values and standard deviations of the measures obtained by the exhibit. The error of temperature is not the standard deviation of data set which is minor of the accuracy.

Sensor	No aerosol black albedo	No aerosol white albedo	With Aerosol black albedo	With Aerosol white albedo
Bottom photodiode [ADC counts]	785,1 ± 6,4	777,5 ± 6,2	755,5 ± 7,7	756,0 ± 6,0
Right photodiode [ADC counts]	561,2 ± 3,1	571,5 ± 3,3	604,2 ± 4,4	609,7 ± 4,0
Left photodiode [ADC counts]	579,4 ± 3,2	582,6 ± 3,4	630,4 ± 4,3	632,8 ± 4,3
Top photodiode [ADC counts]	656,4 ± 5,4	691,9 ± 5,2	686,4 ± 6,9	698,1 ± 5,2
Top photodiode visible range [ADC counts]	546,0 ± 1,8	562,3 ± 2,6	555,8 ± 4,2	562,9 ± 2,3
Temperature LM35 [°C]	28,6 ± 0,5	28,0 ± 0,5	26,4 ± 0,5	26,2 ± 0,5

The white-albedo measure of the light, acquired by the bottom photodiode is compatible with the black-albedo measure. These two measures could be compatible why this sensor is beside of the albedo panels.

The measures of the light, acquired by the right and left photodiodes increase when the aerosol is introduced into the atmosphere chamber. In fact the aerosol particles interact with light, scattering towards these photodiodes.

The white-albedo measures of the light, acquired by the top photodiodes have a higher intensity than the black-albedo measures.

When the aerosol is introduced into the atmosphere chamber, the top photodiodes measure an increment of light intensity, the bottom photodiode measures a decrease of light intensity and the LM35 thermometer measures a decrease of temperature.

These results may explain the aerosol effect in the Earth atmosphere: the reduction of Earth surface intensity of Sun light, and a lower temperature of the atmosphere, in opposition to the greenhouse effect.

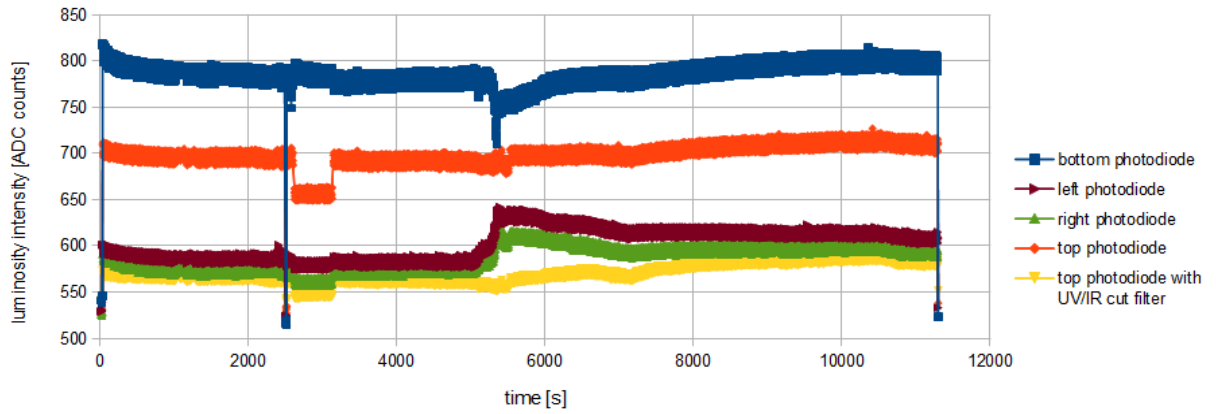


Fig. 6 -Graph of the time series of bottom, left, right and top photodiodes. The 3 short low peaks are due to switch off the lamp for a few seconds.

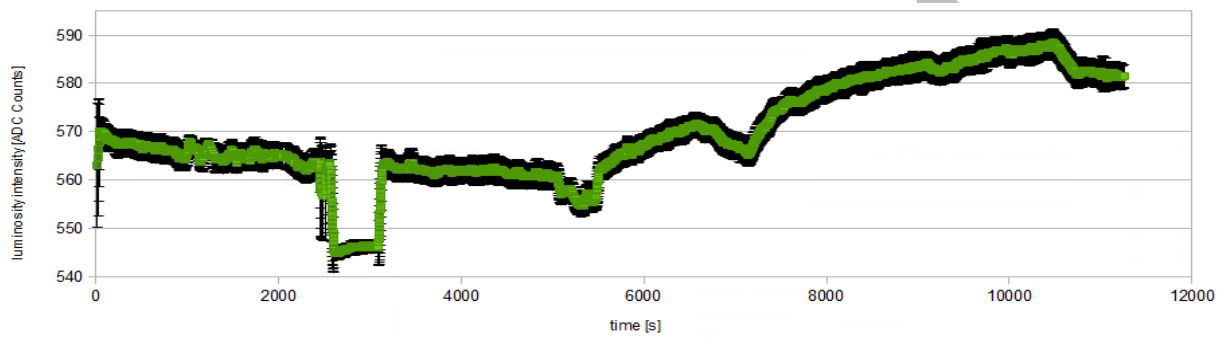


Fig. 7 - The graph of data acquired by the top visible photodiode with "mean filter"

A mean filter can be used to display data emphasizing their trend. The data of the top visible light photodiode are processed with a 20 points "mean filter" (see graph in figure 7).

The filter calculates the mean of 20 data as in equation (1) for all data except last 19 data of the time series:

$$y_n = \frac{\sum_{k=1}^{20} x_{n+k}}{20} \quad (1)$$

From 2624s to 3150s and from 5435s to 5515s the Albedo panels are black; in the other intervals of time they are white. The aerosol smoke is introduced in the atmosphere chamber from 5074s. A photo of aerosol in the atmosphere chamber is visible in figure 8.

24 s and

Conclusion

The exhibit is useful for a didactic purpose. It is also possible to see special trajectories of the aerosol smoke. The temperature and humidity sensors can be used for thermodynamic experiments.

It could be either a good incentive to study physics in a secondary school or a representation of some physics principles in a scientific museum.

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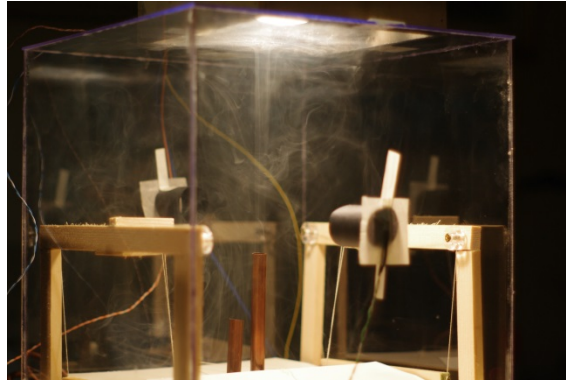


Fig. 8 - A photo of the aerosol when is introduced in the chamber.

INTE 2014

A proposed model of problem-based learning on social media in cooperation with searching technique to enhance critical thinking of undergraduate students

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Abstract

This research aimed at proposing a model of problem-based learning (PBL) on social media in cooperation with searching technique to enhance critical thinking of undergraduate students. The model was developed based on the review of literature, the expert's interview and evaluated by 5 experts. The results indicated that the model had 6 elements and the process of PBL model consisted of 5 steps. The overall model evaluation scores were suitable.

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Peer-review under responsibility of the Sakarya University.

Keywords: Problem-Based Learning, social media, Searching Technique, Critical Thinking

Introduction

Nowadays, modern technologies are integrated with the instructional design models which aim to promote and facilitate learning for people of all ages that can solve the problems regarding place and time limitation for studying in order to become learning societies in 21st century and to learn by focusing on giving an opportunity for all students to create their knowledge, meaningful learning and critical thinking as consistent with the recommendations of learning skills development in 21st century which said that the learning skills development of 21st century is to _____

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learn for enhancing knowledge proficiencies, problem solving and critical skills to achieve the efficiency of learning in current globalization. (Bellanca, 2010) In the framework of learning in 21st century is also concerned with critical thinking skills, problem solving skills, skills of information and technology which students will be given to question an important issues that lead them to be the best for solving problem in different situations appropriately, also can analyze, synthesize and link data orderly. Moreover, the students can interpret and summarize based on reliable analysis as well as reasonable feedback on the basis of experiences and learning process. Developing learners is needed to use technology as a tool to do research, organize, evaluate and communicate information. The use of technology in communication and networking includes access to social media appropriately. (Jame Bellanca and Ron Brandit, 2010)

Critical Thinking is a critical skill for learning in the 21st century. The instructor is needed to seek ways to design learning to the learners whether it is during any given age to practice critical thinking that occurs at any moment of interaction between the instructor and students especially in a time when casual. The critical thinking will come from audience's perception or rendition and depends on an individual understanding of various

aspects as well as age and experiences. In addition, critical thinking must be happened unconsciously as a student's daily life until it is habitual which is known as the critical thinking skills (Ennis 1985; Wijarn Panich, 2012). It is seen that the critical thinking requires knowledge arising from the experiences of the learners. Thus, learning activities by using a problem-based learning which links the experiences of learning contributes the learners to develop their critical thinking skills.(Wijarn Panich, 2012; Worapoj Wongkitrungruang and Atip Jittalerk, 2011)

The important characteristic of the problem-based learning is focusing on student-centered of learning in a small group classes and comes from knowledge searching to use for solving problems that have been assigned. The process of learning will run systemically step by step, acquiring up-to-date knowledge and it can be applied for student in the real life which is efficient for teaching and also it is unlimited to disseminate the knowledge into others sciences. Problem-based learning usage is a strategy that encourages students to develop critical thinking skills and student is able to apply knowledge to solve problems effectively. (Barrows and Tamblyn, 1980; Delisle, 1997; Hmelo and Evensen, 2000) Therefore, it is very necessary to develop critical thinking skills for making the learning skills to students.

Methodology

This research was divided into 2 phases which are (1) The study that related to theories, research and experts' opinion, (2) Evaluation on the proposed model.

2.1 Phase 1 : The study that related to theories, research, and experts' opinion.

The study in this phase included the study of theories and research on the problem-based learning, social media, searching technique and critical thinking, to be used as guidelines in determining learning processes and components of the model. The model will be designed after documentation review, and then the interview will be conducted to get an opinion towards the model from five experts.

2.2 Phase 2 : Evaluation on the proposed model.

After gathering all of information and modifying the model, three educational technology experts and two problem-based learning experts were selected to evaluate the model by using five scales model evaluation form. The expert selection criteria consisted of (1) the experts must have more than 3 years of experiences in the educational technology / problem-based learning field, (2) the experts must have a related work in educational technology / problem-based learning field, and (3) the experts must have experiences in designing or teaching with undergraduate students.

Results

3.1 Phase 1 : Results of the study that related to theories, research, and experts' opinion.

From the study that related to documents, it was found that the problem-based learning had five main steps (Arends, 2001; Kreger, 1998; NapasornSwaddiboonya, 2011) The results indicated that the learning process of the model consisted of five steps as follows:

1) Presentation of the problem : Instructor will determine the heading of the problem situation. By giving each group a situation where the instructor assigned to the destination. Which the students will learn a concept or content before. Students will use Facebook as a tool to present the problem situation.

2) Understanding the problem : When the students get an idea about the problem. Learners within the group reviews to help the students in understanding. By generating ideas online Comment Facebook in exchange and mutual understanding.

3) Problem analysis: Learners within a group share analysis to distinguish the data and information sharing. to find ideas and theories to support it is used as a tool to analyze the problem GroupZap.

4) Study and Implementation : Helping learners research In order to obtain the appropriate information and reasonable solutions using Diigo to save the bookmark to search the Web. If you find information that is incomplete or inadequate. The students to research information again.

5) Collection and Summary: Learners in collaborative problem solving. And abstract concepts To get the right data and accurate. Then be saved into the beta docs.

From the study that related to the documents and opinion of the experts, found that the component of the model consisted of six core components as follows:

1) Instructor: Teachers are the guiding observing the behaviour of learners to help the students understand.

2) Learner: Students enrolled in technology activities. The undergraduate students

3) Content: Content that related to technological activities includes exhibitions Puppet fabrication and field trips a lecture or practical.

4) Social Media: Interaction between the instructor and the students will contribute the learners to share knowledge and opinions. The tools that help learners for communication and learning on social media include, Facebook, Comment Facebook, GroupZap, Diigo and Beta Docs.

5) Searching: The searching is a tool helping to facilitate the learner to search information which is the process of using problem-based learning.

6) Evaluation: The evaluation by instructors consists of measuring critical thinking by using pre-test and post-test.

3.2 Phase 2: Evaluation on the proposed model.

The evaluation scores of the proposed model from three educational technology experts and two problem-based learning experts were summarized in Table 1.

Table 1: Experts' evaluation scores of the proposed model

	Overall	Objective of the Model	Uses of Concepts and Principle	Components of Model	Process of Learning	Tools Usage
Mean (\bar{x}_s)	4.20	4.60	4.20	4.00	3.80	4.40
Interpretation	Very Suitable	Most Suitable	Very Suitable	Very Suitable	Very Suitable	Very Suitable

Note: 5.0 - 4.5 = Most Suitable, 4.49 - 3.5 = Very Suitable, 3.49 - 2.5 = Suitable, 2.49 - 1.5 = Less Suitable, 1.49 - 1.0 = Not Suitable

From Table 1, the proposed model overall score was at a “Very Suitable” level, the model procedure indicated that most of the experts strongly agreed with using problem-based learning method to enhance critical thinking, and the experts believed that this proposed model can be used in a real context. The illustration of the proposed model was shown in Appendix A.

Acknowledgements

The researchers would like to thank the 90th Anniversary of Chulalongkorn University Fund (Ratchadaphiseksomphot Endowment Fund) Chulalongkorn Conference Grant for funding this research.

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Appendix A. The Illustration of the proposed model



A psychological confrontation of adolescents on mass media and religious practices, in Tamil Nadu, South India,

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Abstract

India is an ancient, multi-cultural-religious country. The younger generations are much influenced by Mass Media in their expression of freedom, morality and religious practices, posing a challenge to combat. The question is: whether mass media always takes the Adolescents away from religious practices or does it contribute for its betterment? Hence, we intend to verify “the Psychological confrontation of the Adolescents of Tamil Nadu on mass media and religious practices” From the results of the data analysis we are given to know that the Adolescents in Tamil Nadu counterpoise European and American Experiments in the use of Mass Media.

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Peer-review under responsibility of the Sakarya University.

Keywords: Adolescents, Mass Media, Religious Practices, Psychological confrontation.

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Introduction

The influence of *Mass Media*ⁱ, on the Adolescents has become a primary concern in India. As we know India is an ancient, multi-religious, multi-lingual and multi-cultural country. The country is geographically and politically and linguistically composed of 28 states. Each state has its own language and cultural uniqueness. *Tamil Nadu*ⁱⁱ is one of the 28 states of India. The southern part of the country is basically deep rooted in ancient *Dravidic*ⁱⁱⁱ history and Culture. The prominent language and culture of the Dravidians is called *Tamil*^{iv}.

The younger generation in Tamil Nadu is much influenced by mass media in their expression of freedom, morality and *religious practices*. "Technology and Technological changes are taking place even as we speak, and no one can predict where these changes are headed. However, some technological advances have clear impact." (Adams, 2009, p.501). Mass media is no more an accessory thing in the present time. "In the brave new world a widespread access to information, communications and resources is the only solution to remove the insurmountable barriers to education, democratization process and overall economic growth," (Dutta, 2010, p.1). Info tech has become part and parcel of the day-to-day activities and in religious practices as well. Speaking about religious practices we must remember that Hinduism is the major religion in India. Nevertheless the seeds of Christianity have been sown in India right from the first century by the arrival of St. Thomas the apostle. In Tamil Nadu Christian community is roughly 3 million out of 62 million. That is about 5.4% of the Tamil population. (Census India.com, 2011). For more of pragmatic and personal reasons we choose to limit ourselves only to "Catholic Religious Practices" in this article. Henceforth the "Religious Practices" would refer to Catholic Religious Practices.

1.1. Adolescents in Tamil Nadu counterpoising European and American Experiments in the use of Mass Media

There have been two experiments that draw our attention;

i) A group of 7888 Dutch Students were studied under the use of everyday internet and found that it is related to the psycho-socio-spiritual well-being. Researchers like Aa, Overbeek, Engels, Scholte, Meerkerk, Eijnden, proposed a Diathesis-Stress Model Based on Big Five Personality Traits, have shown that the adolescents who were using frequently the internet were losing the personal uplift and overall growth. "Results from structural equation modeling analyses showed that daily Internet use was indirectly related to low well-being through CIU (Compulsive Internet Use). In addition, daily Internet use was found to be more strongly related to CIU in introverted, low agreeable and emotionally less-stable adolescents. In turn again, CIU was more strongly linked to loneliness in introverted, emotionally less-stable and less agreeable adolescents." (Aa,2009, p.765).

ii) A recent research study in America with the mixed student of White, Asians, Hispanics, Afro-Americans, and Indan-Alaskan Native students by Werner, Matthew, Bumpus, and Rock, in the article "Involvement in Internet Aggression during early Adolescence," have noted that the present day Adolescents are constantly involved in internet communication and contacts and violence and also for other purpose of shopping and gaming and education as well. "About 89% of adolescents surveyed used email, 75% used Instant messages, 48% exchanged IMs everyday, 33% used cell phones to send text messages, 55% used Internet social networking on daily basis." (Werner, 2009, p.608).

On the contrary many Indian Writers think that the use of mass media gives a positive result.

"The electronic communication has significantly modified the life-style of youth (Zachariah 1996, Kumar 2004)... the lasting impact of information technology on Adolescents has provoked social behavior... (Mahajan, Luthra, 1993). Not only the urban, but also the rural setting is undergoing a tremendous transformation... (Johnson, 2000, Singh 1993). 'In today's world it is not so easy to eliminate the use of the media or restrict the influence of the media on the adolescents; hence it is better to educate the adolescents in the critical-analytical and creative use of the media.'" (Fernando, 2006, p.22-31). 'High level media knowledge offers young people a strong, broad perspective to be able to interpret messages along many different dimensions giving them more choices of meaning and to select the one that is most useful from several, but interrelated points of view: cognitive, emotional, moral and aesthetic.' (Devedoss, 2006, p.190). So it is more of 'better use' of the Media than 'doing away' with it.

1.2. Hypothesis

- i) The Adolescents in Tamil Nadu have remarkable access to Mass Media.
- ii) The Adolescents of Tamil Nadu use Mass Media to support the Religious Practices
- iii) The Adolescents of Tamil Nadu are not psychologically compelled by mass media to avoid religious practices.

1.3. Area of the Research

Tamil Nadu is made up of 32 districts in which we selected two districts with prominent Catholic Schools. Of the 24 Cities, we chose Chennai, (Madras) the Capital City of Tamil Nadu. For the Rural Setting we selected Vellore district, having the highest municipalities, (14). And other adjacent districts of Thiruvannamalai and Thiruvallur districts, where there are numerous Catholic Schools. Subjects: 506 boys and 494 girls, Area: In Tamil Nadu, Rural, towns, Urban. Language: Tamil and English. Age: 16 to 19 (pertaining to XI & XII Std). Religion: Catholics

1.4. Tool:

Questionnaire *ASRS-MCFC*^v: Adolescents Simple Response Scale to Measure Compulsion or Free Choice, is composed of 50 questions, the second part of 25 Items which we administered, that deal with Adolescents and Mass Media. There are 2 sections: demographical situations of 10 variables, and 25 items pertaining to mass media. The range of scale value is 1 to 4: never=1, sometimes=2, often=3, and always=4. The Demographical items are composed of *Education* and *Occupation* of the Parents, the *Size* and the *Type* of the Family, the *Gender* and *Age* of the adolescents and finally the *Location* of their inhabitancy. The second section there are 5 *sub-scales*^{vi}

2. Data analysis

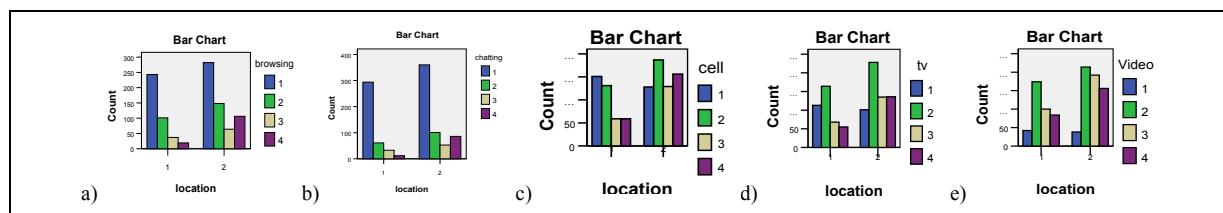
2.1. Verify the 1st hypothesis; 'Adolescents in Tamil Nadu have a remarkable access to the Mass Media'.

Table – 1. Statistical report with location (1=rural / 2=urban)

Location		browsing	chatting	cell	tv	Video
1	Mean	1,58	1,41	2,07	2,16	2,57
	Std. Deviation	,846	,767	1,055	,989	,937
	Variance	,715	,588	1,114	,979	,878
	Grouped Median	1,46	1,30	1,88	2,04	2,52
	Pearson corr. Sig.	0,000	0,000	0,000	0,000	0,000
2	Mean	1,99	1,78	2,52	2,51	2,78
	Std. Deviation	1,134	1,101	1,095	1,021	,906
	Variance	1,285	1,213	1,198	1,042	,821
	Grouped Median	1,74	1,52	2,50	2,47	2,76
	Pearson corr. Sig.	0,000	0,000	0,000	0,000	0,000
Total	Mean	1,83	1,63	2,34	2,37	2,69
	N	1000	1000	1000	1000	1000
	Std. Deviation	1,047	,997	1,101	1,022	,924
	Variance	1,097	,995	1,213	1,044	,854
	Grouped Median	1,61	1,42	2,25	2,30	2,66

Reporting the summary of the Table -1 of the descriptive statistics, for each of the 5 variables such as: 1) *Browsing* 2) *Chatting* 3) *Cell* 4) *TV* 5) *Video*. (Refer Questionnaire). The table shows that the adolescents have recourse to *cell* and watching *TV* and use of (VCD + Films) *Video* are found to be very high, (72.1%, 78.6%, and 92% respectively), The “p” value is “0,000” in all 5 variables, indicating significant differences between each item. “An increasing number of young people spend a great deal of time watching television, reading

newspapers and magazines, playing records, listening to the CD and surfing the Internet” (Devadvadoss, 2006, p.185). They have recourse to the *browsing* and *chatting* much less, (47.5% and 34.6% respectively),



Graph-1 demonstrates the location and mass media access.

One aspect that is very strongly emerging (Graph-1) is that of the use of *Video* especially among the urban adolescents ($M_2=2,78$ - table:1). It's indeed a significant factor that sums up the best form of audio-visual media that the adolescents are attracted to. More appropriate for the Urban adolescents. Secondly the use of *Cell* phone (table-1 $M_2=2,52$) (Graph-1, *chart-d*), among the Urban Adolescents, is very high compared to the other items, the characteristic feature of the city adolescents.

2.2. Verifying the 2nd hypothesis: *The Adolescents of Tamil Nadu use Mass Media to support the Religious Practices.*

The fact that the access to mass media need not necessarily mean that someone is *psychologically addicted* in the oft used '*negative connotation*'. To verify this, the following variables are analyzed. 6)*Literature*, 7)*Production*, 8)*Song*, 9)*AV*, 10)*Propaganda*, 11)*Magazine*, 12)*MM*. (for detail, refer Questionnaire).

Table-2 Statistics

		literature	Productions	songs	av	propaganda	magazine	MM
N	Valid	1000	1000	1000	1000	999	1000	1000
	Missing	1	1	1	1	2	1	1
Mean		2,35	2,43	3,02	2,51	1,93	1,99	2,36
Sum % (for values 2, 3, 4)		82.5%	81.4%	93.4%	86.1%	59.2%	74.8%	79.3%
Median		2,00	2,00	3,00	2,00	2,00	2,00	2,00
Mode		2	2	4	2	1	2	2
Std. Deviation		,928	,997	,956	,954	,968	,944	,998
Variance		,861	,995	,915	,911	,938	,892	,996
Sum		2351	2433	3018	2508	1925	1993	2363

Reporting the table-2 of the summary of the descriptive statistics for each of the selected 7 variables (*literature, productions, songs, AV, propaganda, magazine, modern means*), using the process of ANOVAs, confronting the medium / average on the accessibility of the mass media the following interpretation is drawn.

Literature: 82.5%, *Production*: 81.4%, *Song*: 93.4%, *Av*: 86.1%, *Propaganda*: 59.2%, *Magazine*: 74.8%, *Mm*: 79.3%. The highest recourse is scored on '*Listening to faith oriented Songs*', followed by ample use of '*AV*.' This is followed by small marginal difference in having recourse to '*literature and catholic mass media productions*'. It's a common phenomenon for the adolescents to be attracted more towards audio-visual program, thereby using them more for the purpose of religious practices.

Table – 3 Report

location		literature	Productions	songs	av	propaganda	magazine	MM
1	Mean	2,39	2,51	3,14	2,62	1,99	2,09	2,32
	N	400	400	400	400	400	400	400
	Std. Deviation	,941	,976	,921	,953	1,020	,998	1,005
2	Mean	2,32	2,38	2,94	2,43	1,89	1,93	2,39
	N	600	600	600	600	599	600	600
	Std. Deviation	,918	1,009	,972	,949	,931	,903	,993
Total	Mean	2,35	2,43	3,02	2,51	1,93	1,99	2,36

N	1000	1000	1000	1000	999	1000	1000
Std. Deviation	,928	,997	,956	,954	,968	,944	,998

Confronting the report of Table-3 the mean value of the 7 variables, of the descriptive analysis in 2 locations: Rural (M₁) and Urban (M₂) the following summary is drawn. The highest scoring is 3,14 for the variable 'Songs' "I listen to faith oriented songs" in Rural and 3,02 in Urban respectively. It indicates that in both the location the adolescents are using the songs in religious practices. This is followed by the item 'Av' 'I see faith oriented audio-visual programs', M₁=2,62 and M₂=2,51, the second highest scoring in the series. The third highest use of mass media is noticed in the item 'Production', My practice of catholic faith is better with the use of mass media of the Catholic Faith Productions. M₁=2,51 and M₂=2,43.

2.3. Correlation to verify, "mass media supports religious practice".

**Correlation is significant at the 0.01 level (2-tailed). *Correlation is significant at the 0.05 level (2-tailed).

Confronting the correlation statistics between two items of 'Tv' and 'Video' of the first objective variables with that of the items that are supportive to the religious practices such as 'Songs', 'Av', and 'productions', the following summary is drawn. Those who affirm the access to 'TV' have a remarkable access to 'video',417(**), 'songs',.069(*), and 'Av',-.085(**) with 'p'=.000'/.028'/.007' respectively indicating a very high significance. And those who have greater access to 'Video' affirm that mass media support religious practice using the item 'songs',.147(**), 'Av',-.094(**), 'p'=.000'/.003' respectively. similarly we observe the variables 'songs' with 'Av',388(**), and 'productions',293(**) where 'p'=.000'/.000' respectively. While 'Av' with 'production',293(**) where 'p'=.000' an optimum level of correlation with the said objective. Those who have greater access to mass media also confirm greater support of mass media in religious practices.

2.4. Verifying the 3rd hypothesis: The Adolescents of Tamil Nadu are not psychologically compelled by mass media to avoid religious practices.

To confront this objective we deploy the following 6-tems: (ref.Questionnaire) 13) I get enticed to watching Television than going to the church (Enticement) (-ve). 14) Mass media gives me consolation than practising catholic faith (mm Consolation) (-ve). 15) I spend more time with my modern gadgets (Cell phone and computers, Internet-chatting etc.) than with my Religious Practices.(moreMM) (-ve). 16) Media is sufficient for me to get all the satisfaction and answers with regard to the practice of my catholic faith.(mmSatisfy) (-ve)

17) I am psychologically compelled / addicted to the mass media than to practicing of my catholic faith.(mmcompel) (-ve)18) The use of the mass media has manipulated my freedom and spontaneity against practicing my catholic faith.(manipulation) (-ve)

Table - 5 Statistics

	fatheredu	motheredu	enticement	mmconsolation	moremm	mmsatisfy	mmcompel	manipulation
N Valid	1000	1000	1000	1000	1000	1000	1000	1000
Missing	0	0	0	0	0	0	0	0
Mean	2,86	2,90	1,92	2,05	2,11	1,92	2,13	1,97
Percentage	80%	77%	75.6%	71.3%	66.8%	76.1%	67.9%	73.8%
Median	2,93(a)	2,99(a)	1,76(a)	1,86(a)	1,93(a)	1,75(a)	1,97(a)	1,78(a)
Mode	3	3	1	1	1	1	1	1
Std. Dev.	,844	,852	,983	1,057	1,075	1,003	1,050	1,039
Variance	,713	,726	,966	1,118	1,156	1,005	1,101	1,079

Calculated from grouped data. * percentage is sum of 1+2+3 for father's education and mother's education. percentage is sum of 1+2 for all the dependent variables (ie. 'Never' + 'sometimes').

Reporting the table -5 of the summary of the descriptive statistics for each of the 6 variables the result: percentage referring to 1 and 2 (i.e., 'never' and 'sometimes' respectively), 'enticement'=75.6%, 'mmconsolation'=71.3%, 'moremm'=66.8%, 'mmsatisfy'=76.1%, 'mmcompel'=67.9%, 'manipulation'=73.8%. (The higher the score indicates negative result).

All the variables score very high on "never" (or sometimes) get *enticement*. 'I get enticed to watching Television than going to the church' indicating that they could stop watching TV when needed to go to church. Therefore the adolescents are not compelled and not psychologically controlled by mass media as against religious practices. Likewise, the rest of the 5 items. Interestingly the education of the father and mother are 80% and 77% respectively of graduation and post graduation. The more the parents are educated the better ascendancy of the adolescents over the mass media.

2.5. **Correlation is significant at the 0.01 level (2-tailed). *Correlation is significant at the 0.05 level (2-tailed).

Confronting the correlation statistics between items the following summary is drawn:

'Enticement' with 'mmconsolation'=,210(**), p=,000,/ 'moremm'=,300(**), p=,000,/ 'mmcompel'=,287(**), p=,000,/ 'manipulation'=,115(**). P=,000. Indicate: one who is not enticed by mass media is also not compelled, does not spend more time with modern gadgets than it is necessary, and not manipulated by mass media as against the religious practice.

'Mmconsolation' correlates with, 'moreMM'=,089(**), p=,005,/ 'mmsatisfy'=,159(**), p=,000,/ 'mmcompel'=,249(**), p=,000, Indicate: there is an average score of correlation between the one who is not being satisfied with mass media and not spending more time in mass media, nonetheless the score is significant, similar experience of not being compelled psychologically than to religious practices.

'moremm' correlates with 'mmsatisfy'=,105(**), p=,001,/ 'mmcompel'=,277(**), p=,000,/ 'manipulation'=,155(**), p=,000. Indicate: one who is not spending more time with mass media than religious practices correspond to 'not being compelled psychologically' nor 'manipulated by mass media' as against religious practices.

'mmsatisfy' correlates with 'mmcompel'=,115(**), p=,000,/ 'manipulation'=,079(*), p=,013. Indicate: an average correlation between not satisfying and not being manipulated.

'mmcompel' correlates with 'manipulation'=,145(**), p=,000. Indicate: a good score of correlation between not being compelled and not being manipulated by mass media as against religious practices.

All of the above correlations have optimum score such as: (**), p=,000, that various items of mass media correlate with inter-variables and intra-variables.

Conclusion:

Summing up the descriptive statistics of the data analysis with the output of table -1 to table-6 affirms that the Adolescents in Tamil Nadu counterpoise European and American Experiments in the use of Mass Media as referred earlier. Instead, though i) *The Adolescents in Tamil Nadu have remarkable access to Mass Media*. Yet the Adolescents show in their experience that ii) *Mass Media could support the Religious Practices*. Moreover iii) *The Adolescents of Tamil Nadu are not psychologically compelled by mass media to avoid religious practices*. "Today a dialogical rapport has been created where in science and technologies continue to develop with the final end of bettering human conditions. The unique role of religion, in this regard, is to preserve values and wisdom necessary to handle the technological explosion." (Fernando, 2006, p.30).

Our analysis of the data sheds light that Mass media could bear good fruits if they are guided "... guidelines on confronting these new phenomena. In the final analysis, however, in most of the cases informed individuals take their own moral decisions." (Fernando, 2006,p.31). We need to focus our attention to 'how we use Mass media than shutting down mass media from adolescents', "... we will have to define very clearly what type of man and society we actually want, and then train the youth accordingly. ... this should not be done on the basis of the ready-made models of the so-called developed societies. We should develop our own models on the basis of our own socio-cultural and an economic condition, what really needed is 'cultural revolution for freedom'. (Pant,1995, p.104).

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- ¹ *Mass Media* consists of media institutions and processes such as diffusion of information, and media effects such as persuasion or manipulation of public opinion. In addition to studying practical skills of journalism, public relations or advertising, they offer programs on "mass communication" or "mass communication research." http://en.wikipedia.org/wiki/Mass_communication/ (February 2011)
- ¹ *Tamil Nadu* has a history that dates back to a thousand years or more. The state's reputation lies with the fact that one of the first three universities established by British East India is located here in Chennai – the University of Madras. (<http://www.tamilnadueducation.net/Facts/1>)
- ¹ *Dravidian peoples* refers to the peoples that natively speak languages belonging to the Dravidian language family. Populations of Dravidian speakers live mainly in southern India, Anthropologists are largely at odds. A number of earlier anthropologists held the view that the Dravidian peoples constituted a distinct race. http://www.newworldencyclopedia.org/entry/Dravidian_peoples (18/10/2013).
- ¹ *Tamil* language belongs to the Dravidian family, which contains about two dozen living languages mostly spoken in southern and eastern India. Tamil, therefore, probably separated from its closest relatives around 1000-500 BC.
- Did The People Of Indus Valley Spoke Tamil ? Visit Ancient Indu Valley Info .
<http://tamilculturewaterloo.org/tamilhistory.htm> (21/10/2013)

A qualitative study of baccalaureate nursing students following an eight-day international cultural experience in Tanzania: Cultural humility as an outcome.

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Abstract

Transcultural and intercultural competence through study abroad is widely recognized as a preferred teaching approach for the development of globally competent health care practitioners because of the noteworthy effects that these experiential opportunities have on students. Sparse research has been conducted to determine if controversial *short-term* study abroad trips of less than two weeks are achieving positive outcomes. The purpose of this interpretative qualitative study was to describe the nature and meanings of a short-term international cultural experience for U.S. nursing students that travelled to Tanzania over an 8-day period. The results indicated that the participants experienced culture shock, but they also gained in self-awareness, cultural empathy, and leadership skills. The data also revealed that for many participants, this international experience led to the development of cultural humility. Langer's theory of Mindfulness, and Campinha-Bacote's Process of Cultural Competence provided the theoretical framework for this study. This paper also discusses pedagogical approaches for short-term programs and outcomes.

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Peer-review under responsibility of the Sakarya University.

Keywords: Cultural humility, cultural competence, sojourn, international experiences, immersion experiences, study abroad, transcultural nursing, short-term study abroad, nursing study abroad.

1. Introduction

The profession of nursing espouses the importance of a “democratic spirit which leaves color, race and prejudice behind . . . it is the aim to give the same kind of care to men, women, and children, to all colors and creeds, rich and poor, enemies and friends” (Harmer & Henderson 1939, p. 8). The American Association of Colleges of Nursing (AACN) recognizes that the environment in which professional nurses practice has become more “diverse and more global in nature,” and mandates “attention to diversity in order to provide safe, high quality care” (AACN, 2012, p. 6). Transcultural nursing is the humanistic and scientific area of formal study and practice that focuses on differences and similarities among cultures with respect to human care, health (or well-being), and illness (Leininger, 1988). In transcultural nursing, people with different cultural backgrounds are not separated into “cultural” groups; rather, the nurse locates common needs and common experiences.

The Transcultural Nursing Society (2012) has found that nurses and other health care providers frequently are reluctant to, or incapable of providing meaningful care to people who are different from their own cultural backgrounds. Rather, blatant cultural clashes and practices that are ineffective or harmful are imposed on the diverse patient, ignoring the cultural needs of the individual. This is particularly apparent in the United States, where racial, ethnic, and socioeconomic status disparities in health care persist at unacceptably high levels (U.S. Department of Health and Human Services [USDHHS], 2010). Blacks, Asians, American Indians, Alaska Natives, and Hispanics receive poorer quality care than Whites and have limited access to care when compared to Whites within the United States, according to the 2010 *National Healthcare Quality Report* and *National Healthcare Disparities Report* issued by the USDHHS Agency for Healthcare Research and Quality (AHRQ). Research by Reeves and Fogg (2006) found that only 50% of U.S. nursing graduates stated that they were comfortable providing care to individuals who were different from their own ethnic or cultural backgrounds.

One way to develop culturally responsive nurses is to provide authentic ways for nurses and nursing students to develop transcultural nursing skills. Participation in international cultural experiences can help

nursing graduates become more aware of the unique needs of their patients as they consider the impact of culture, religion, and socioeconomics on health care (Banks, 1994).

2. Growing Body of Evidence Supporting International Study

Colleges and universities are searching for a variety of ways to encourage students to participate in international cultural experiences because of the measurable positive outcomes that these experiences have on students. As a result, international cultural experiences in all disciplines have increased in popularity in recent years, according to the Institute of International Education's (IIE), *Open Doors Report* (2011). The number of U.S. students studying abroad has tripled over the past 20 years. However, this still represents just over one percent of all U.S. students enrolled in higher education, a very small proportion of the 20 million U.S. college students (IIE, 2011), and an even smaller percentage of nursing students. Whereas there are many reasons that prohibit students from studying abroad, including lack of finances, programs not conducive to their schedules, or lack of faculty and parental support; the benefits of an international cultural experience program has been well-documented in the literature (Salisbury, Umbach, Paulsen, & Pascarella, 2009). Short-term programs have played a significant role in providing increased opportunities for students who wish to participate in international cultural experiences by offering flexible opportunities for students who were unable to participate in traditional long-term programs (IIE, 2012). Likewise, longer international cultural experiences are often difficult to arrange in rigorous programs such as nursing, which are bound by stringent rules and regulations of national accrediting agencies. These accrediting agencies require in-hospital and other clinical experiences on a weekly basis, limiting the amount of time students can travel abroad. If a student chooses a semester of travel, the graduation date is often delayed for a semester or an entire year, since nursing courses follow a specific sequence. A summer option exists for some, however, many students choose to work over the summer months to supplement their income.

2.1 The Need for Short-Term International Programs

Given the constraints placed on U.S. nursing programs as well as the limitations imposed by U.S. students' financial resources and personal obligations, it is necessary to identify realistic opportunities for international experiences for nursing students. Although previous research supports the goal of increased students' global understanding and cross-cultural knowledge through traditional *long-term* study abroad trips, limited research has been conducted to determine if *short-term* study abroad trips are achieving this goal. Some researchers have disputed the value of any program of less than two weeks. However, several studies found that it is the pedagogical approach which greatly affects learning regardless of program length (Braskamp, Braskamp, & Merrill, 2009; Bosworth, Haloburdo, Hetrick, Patchett, Thompson, & Welch, 2006; Franklin, 2010; Green, Johansson, Rosser, Tegnah, & Segrott, 2008; Zorn, 1996; Zorn, Ponick, & Peck, 1995).

Studies identifying significant student outcomes through short-term international experiences report that students who participated in short-term programs of less than one month were transformed by the experience (Caffrey, Neander, Markle, & Stewart, 2005; Maltby & Abrams, 2009); demonstrated flexibility (Johns & Thompson, 2010; Larson et al., 2010; Wood & Atkins, 2006); developed greater self-awareness (Wallace, 2007); gained in understanding their professional role (Caffrey et al., 2005; Ter Maten & Garcia-Maas, 2009); showed increases in intercultural sensitivity (Anderson, Lawton, Rexeisen, & Hubbard, 2006; Caffrey et al., 2005); reported enhanced cultural adaptation and adjustment (Inglis et al., 2000) and developed an understanding of global interdependence (Chieffo & Griffiths, 2004).

Whereas short-term study abroad programs are not considered ground-breaking, short-term international experiences merit rethinking as an effective pedagogical approach to enhance students' understanding of cultural differences, cultural awareness, and global health issues. In fact, some educators argue against a full immersion. Woolf (2007) urged educators to consider that when contemplating immersion experiences over traditional didactic methods, that the length is often an unacceptable measure of academic outcomes when contemplating immersion experiences over traditional didactic methods.

3. Purpose of Inquiry

The purpose of this interpretative qualitative study was to describe how participants (nursing students) created meaning from a short-term international cultural experience of eight days in Tanzania in the short term. This research was uniquely different from previous research studies in that it examined the outcomes of a short-term international cultural experience of eight days instead of a longer experience. There is a large gap in the literature evaluating the efficacy of programs less than one month in length. This study sought to address that gap by exploring the ways in which nursing participants created meaning from a short-term (8 day) international immersion experience. Prior research on short-term experiences is scarce and only two articles covering one-week programs were found: a program of one-week duration from the discipline of occupational therapy (Mu, Coppard, Bracciano, Doll, & Matthews, 2012) and a qualitative study by Evanson and Züst (2006) that examined

the benefits of a short-term experience for six nursing graduates who spent one week in Guatemala. Both studies reported positive learning and growth outcomes.

4. Research Question

The research question that guided this study was: How do the participants describe their experience of a one-week international cultural experience?

5. Theoretical Framework

The theorists who informed this research were from the field of curriculum studies, and transcultural nursing. Langer's theory of Mindfulness (1997) from curriculum studies, and Campinha-Bacote's Process of Cultural Competence (1999) in the Delivery of Healthcare from the discipline of nursing, guided the pedagogical approach used for the research design, and provided the framework and foundation for interpretation and analysis of the qualitative data.

5.1. Langer's Theory of Mindfulness

The theory of Mindfulness was selected because of the components of reflexivity, multiple perspectives, analytical empathy, and intentional creativity (Vande Berg & Paige, 2009), all of which are necessary traits of the transcultural nurse. Constructionists/constructivists see mindfulness as an ongoing process of evaluation, cognitive framing or re-framing, in order to grasp a better understanding of the cultural context. Mindfulness is a skill that supports intercultural capabilities and competence. It guides us to be aware of our own personal communication approach while reflecting on the effect that these interactions have on patient care. In the context of intercultural communication, mindfulness means attending to internal assumptions, cognitions, and affective behavior at the same time remaining acutely aware of opposing communication assumptions, cognition, and emotions (Ting-Toomey, 1999).

5.2. Campinha-Bacote's Process of Cultural Competence in the Delivery of Healthcare

The Process of Cultural Competence in the Delivery of Healthcare Services is a model for delivering culturally competent health care developed by Campinha-Bacote. This model describes cultural competence as an ongoing process in which the health care provider continuously strives to achieve the ability to work effectively within the cultural context of the client, the client's family, and or the client's community (Campinha-Bacote, 2002). The expectation of this model is that health care providers will view themselves as continuing along the process of *becoming* culturally competent rather than *being* culturally competent. This process entails the incorporation of cultural awareness, cultural knowledge, cultural skill, cultural encounters, and cultural desire: "a genuine passion to be open and flexible with others, to accept differences built on similarities, and to be willing to learn from others as cultural informants" (Campinha-Bacote, 2002, p. 183). This model was also selected because it introduces the concept of cultural humility. When individuals acquire cultural humility, they begin to recognize and understand the extent and harm of health disparities. Cultural humility serves as the basis for good moral education toward optimal healthcare and culturally competent and effective nursing care.

6. Limitations and Delimitations

One concern is that the participants who choose this immersion experience may have possessed a greater interest and sensitivity to cultural issues than those who declined to participate. The participants may have already developed a greater desire to interact with diverse people and cultures and this may have influenced their participation in this experience and research study. A further concern is that the participants also may have had difficulty overcoming preconceived biases and this 8-day experience may have reinforced these biases, rather than reduced them. For some potential participants, financial issues may have prevented them from participating in this international experience, artificially distorting the results.

The participants of this study were a homogenous group of students from the third poorest county in the State of Ohio, which is part of the Appalachian region. This study examined participants' thoughts, perceptions, and feelings during the international cultural; the long-term lasting effects of this experience were not studied. Also not examined in-depth was the motivation of students participating in this experience.

7. Participants and Setting

The participants were comprised primarily of White first generation college students and Tanzania was selected as the site. Many colleges and universities select third world countries as a destination for their study abroad programs to provide for a more intense cultural encounter. Study abroad programs in underdeveloped countries have been shown to help participants understand the challenges and realities in which most citizens of the world live; an awareness that most students lack (Mkandawire-Valhmu & Doering, 2012). "Immersion into social spaces and clinical experiences that are very different from a student's everyday experiences in their home

country can promote the development of reflective practice and clinical reasoning” (Mkandawire-Valhmu & Doering, 2012, p. 82). While in Tanzania, the participants engaged in clinical practice at health care facilities such as HIV clinics, the Kilimanjaro Christian Medical Centre (KCMC), and several children’s homes. In addition, several opportunities to participate in varied social experiences were provided. Finally, the participants were brought to several subcultures within this section of Tanzania in an effort to help them better understand the multiple layers of diversity and ethnicity.

8. Effective Pedagogy in Study Abroad

What appears essential to successful international study abroad is effective pedagogy. For example, nearly all short-term programs are faculty-led, and this format provides many benefits over the traditional long-term programs that merely incorporate study at foreign institutions (Donnelly-Smith, 2009). Faculty members who guide short-term programs often are more engaged with the students and exert more control over the experience to ensure that the study abroad program is closely integrated with course objectives to enhance learning. The general consensus from faculty members is that highly structured short-term programs that incorporate reflection and personal hands-on experiences provide the most benefit (Donnelly-Smith, 2009).

8.1. Pre-international coursework.

Each student who elected to participate in this experience was required to complete at least one of two nursing courses with a global focus, immediately prior to, or during, this sojourn. The learning objectives for both courses encouraged participants to apply culturally appropriate and culturally congruent health care, and to take into account the global barriers to health care. Both courses explored therapeutic communication techniques with individuals and families from diverse cultural groups and different religious backgrounds.

8.2. Pre-international seminars.

The participants prepared for the international experience by attending a series of six pre-international seminars that covered the language, social norms, rituals, traditions, worldview, and an overview of several ethnic groups of Tanzania, specifically the Maasai and Chaga. Considerable discussion and reflection on race, ethnic, and religious differences occurred, which helped participants identify their own personal biases, racial, and prejudicial behaviors. The pre-international seminars helped to prepare the sojourners for many different experiences that they might encounter regardless of where they traveled, with whom they interacted, or their personal background (Cushner & Brislin, 1996).

8.3. Pre-international preparation in Geneva, Switzerland.

The participants spent four days in Geneva, Switzerland, as further preparatory work for the experience in Tanzania. This served two purposes. First, it allowed a transition from their culture to a foreign culture somewhat similar to their own. It also provided a break in the travel time, allowing the participants to rest prior to departing for Tanzania. To help prepare participants for their transition from American to Tanzanian culture, the participants visited the United Nations (Palais des Nations), the World Health Organization (WHO), and the United Nations High Commission for Refugees (UNHCR). These few days in Switzerland supported a more in-depth look at global health issues, international organizations, and worldwide health initiatives.

8.4. Tanzania.

This international cultural experience took place in both rural and urban areas in the northeastern part of Tanzania between the two towns of Arusha and Moshi. The rural area of Arusha, where the majority of the children’s homes were located, is the site of game reserves and national parks of Ngorongoro, the Serengeti, and the Maasai Mara. The Maasai are known as the “most picturesque people in East Africa” (Hodgson, 1999, p. 121) and they still occupy portions of this region. The participants were introduced to this ethnic population in an attempt to demonstrate a variety of subcultures within this section of Tanzania. The participants were asked to make comparisons and contrast the Maasai with other indigenous people from the United States and other parts of the world. This was important to help the participants gain a better understanding of issues of dominance and power. The participants also spent time with the Chaga people near Moshi on the southern and eastern slopes of Kilimanjaro.

8.5. Health care sites in Arusha: Homes for children.

Both the Chaga and the Maasai served as our guides and escorted us to various children’s homes during the first four days in Tanzania. The purpose of visiting these homes was to gain a better understanding of the socio-cultural effects of poverty and global health issues on children.

8.6. Health care facilities.

The participants volunteered at the Kilimanjaro Christian Medical Centre (KCMC), and a rural HIV health clinic. At these sites, the participants were encouraged to reflect on the necessary skills needed to provide appropriate and culturally congruent health care. Participants were also encouraged to utilize therapeutic communication techniques when interacting with the children and adults at each site, employing aspects of Langer's Mindfulness, as well as Campinha-Bacote's model specific to cultural encounters. The hospital experience at KCMC provided the participants an opportunity to interact with nurses and patients in the emergency department, the intensive care unit, the neonatal nursery and the general floors.

8.7. Social opportunities.

The participants were invited guests at a post-wedding celebration in Rombo village in Moshi, an event that allowed them to experience the traditional food, dance, and celebration of the Chaga people. During the day, the participants assisted family members in preparing food, decorating, and preparing the tables and chairs for the guests. The participants were encouraged to notice differences and similarities with their own families and traditions, such as how the women of the village prepare the food in open pits instead of ovens. The participants danced and shared in the celebrations which allowed them the opportunity to make a personal connection to the culture.

8.8. Daily reflection and debriefing.

In line with the study design, each evening the participants returned to their rooms to relax, reflect, and complete an entry in their reflective journal. This was followed by evening debriefing sessions. The participants used this time to ask questions concerning the day's encounters and experiences. Cordero and Rodriguez (2009) found that interactive group process and reflective learning could facilitate and support a greater appreciation and understanding of different worldviews. Terhune (2006) stated that this reflection and dialogue can be effective in supporting the changing of attitudes and learning new behaviors. The participants were encouraged to engage in dialogue during the debriefing sessions and critically reflect on what they experienced.

9. Data Collection Methods and Data Analysis

Data collection methods included reflective journaling, focus group discussions, and individual interviews. Published literature was reviewed to identify concepts, themes, and codes as well as other concepts and themes unrelated to the literature. Themes were clarified through ongoing review of pertinent literature. The data were sorted, ranked, and coded. The data were reviewed across several data sources multiple times to amend, reduce, and revise the themes for a more complete and accurate portrayal of the findings. The students member-checked their journal entries and transcripts for accuracy. Two faculty peer-reviewed the transcripts and journals and offered input into the consistency of the themes. The initial reactions of participants' written statements from the reflective journals were reviewed immediately, followed by review of audiotaped conversations that occurred one month later during focus group discussions. The data collected six months later through the personal interviews, was compared and contrasted with student reflective journals and focus group discussions looking first for changes in the participants' perspectives and for similarities and/or inconsistencies

Table 1: Data Collection Methods

Method	Frequency	Location	Duration
Reflective Journals	Daily while abroad	On-site in Tanzania	8 Journal entries
Focus Group Discussion #1	Once 4 weeks after the return home	Campus	2.5 hours
Focus Group Discussion #2	Once 4.5 weeks after the return home	Campus	2.0 hours
Personal Interview	Six months after the return home	Researcher's Office	45-75 minutes

10. Findings

Langer's theory of Mindfulness (1999), Campinha-Bacote's (1999) concepts of awareness, skills, knowledge, encounters, and were useful in interpreting participant input and comments. During this 8-day experience in Tanzania, culture shock and disequilibrium, as well as feelings of sensory overload and a sense of being overwhelmed, were identified. The participants also developed a keener sense of self-awareness and a better understanding of cultural differences and issues of racism. The participants verbalized respect, admiration, and empathy for the people that they met in Tanzania. Since this trip was intense, the participants also experienced depression and issues of re-entry acculturation once they returned home. Intermediate benefits reported by the participants six months later were supported in the literature for both long-term and short-term programs as enhanced self-awareness (Braskamp et al., 2009; Caffrey et al., 2005; Franklin, 2010; Fry et al., 2009; Ingraham & Peterson, 2005; P. J. Pedersen, 2009; Wallace, 2007), and personal growth and cultural awareness (Button et al., 2005; Greatrex-White, 2007). Finally, the participants described this experience as life-changing and the desire to learn more about diverse people. The following comment by one student reflects the consensus of the participants: "These past few days will always be imprinted on my heart as memories that I will cherish for the rest of my life. I cannot elaborate on the significance of this trip."

The six major themes that evolved from the data are identified in Table 2 below:

Table 2: How Do the Participants Describe Their Experience of a One-Week International Cultural Experience in the Short Term and Six Months After Returning Home?

Themes	Participants
Disequilibrium and culture shock.	8 of 8
A greater self-awareness and personal responsibility for issues of prejudice and bias developed.	6 of 8
A deeper understanding of similarities and differences occurred.	8 of 8
An enhanced awareness of "others" and the development of cultural empathy.	8 of 8
A sense of loss ensued after returning home.	7 of 8
Life-changing: the development of cultural humility	7 of 8

10.1. *Feelings of disequilibrium and culture shock.*

The participants first expressed responses of culture shock and disequilibrium, and they described difficulty with sensory overload. They described excitement but also disorientation due to the rigorous schedule and the vast amount of new sights, sounds, smells, and people they encountered. The literature describes shock as a frequent outcome during or following sojourn experiences (Furnham, 2010; Maltby & Abrams, 2009; Ward, Bochner, & Furnham, 2001) stating that when a person encounters a new culture for the first time, their initial perspective may be insufficient to cope and function within the different context and environment (Stier, 2003). This is also true even with adequate pre-immersion preparation (Hutchings, Jackson, & McEllister, 2002). A sense of disequilibrium for the participants resulted from the overcrowding of the hospitals, the living conditions, the lack of infrastructure, food and language differences, and diversity in dress, religion, and ways of living. None of the participants had prior international travel, except for vacations to Canada and the Bahamas. It is important to note that cross-cultural conflict as a result of cultural encounters often stimulates cross-cultural learning, as was evident in this study (Chang, 2007; Wei-Wen Chang, Cheng-Hui, Yu-Fu, & Yu-Hsi, 2012).

10.2. *Greater self-awareness and a new understanding of prejudice and bias.*

Self-awareness is the deliberate and conscious process of re-examining one's personality, knowledge, values, beliefs, and ethics and the impact of these factors when interacting with the other culture (Campinha-Bacote, 2007; Purnell & Paulanka, 2008; St. Clair & McKenry, 1999). Self-awareness is one aspect of mindfulness through which the person begins to understand the other person's behaviors and traditions from multiple cultural angles (Gudykunst, 1991; Langer, 1989, 1997). The participants worked with people who had fewer material goods, and yet, according to the students' comments, they appeared to be happier, kinder, and more giving. These encounters evoked strong feelings in most of the participants; as a result of these observations, they elaborated on feeling embarrassed, guilty, or ashamed of their past actions and behaviors. All of the participants struggled with the wealth and materialism of the United States and the scarcity of supplies and resources for the people with whom they interacted in Tanzania, especially the children. They often spoke of the difference

between “wants” and “needs.” This is consistent with the literature that reports students participating in international travel who have reported feelings of guilt, especially once they return home (Bentley & Ellison, 2007; Evanson & Zust, 2006; Levine, 2009; Maltby & Abrams, 2009; Stier, 2003).

An important learning experience for the participants was an awareness of how Americans are perceived. They verbalized feelings ranging from humor to anger. They began to understand that most attempts to combat prejudice have been aimed at reducing the tendency to categorize other people. They also realized that categorizing people was a fundamental and natural tendency (Langer, 1997). The participants began to identify their own biases and their personal responsibility in dealing with issues of racism and prejudice. Several participants became acutely aware of their own negative reactions and thoughts and were disturbed by this self-discovery. This prompted some of the participants to confront their own racist behaviors as seen in the following comment from one student’s journal: “I always thought that as a nurse I would never turn down the opportunity to care for any patient. But while I was walking through that hospital, I realized that maybe there is a little bit of close-minded in me. I felt like I didn’t want to touch anybody or get near to many people. That was a weird situation for me. I don’t know if I would react the same way if we were in a hospital in the United States or if it was just because of the environment that we were in.”

During the focus group discussions (after their return home one month later), several of the participants further discussed their reactions to prejudice and stereotyping. A student described a situation that she encountered days after she returned home. She found the courage to speak up rather than remain silent when confronted with a racist statement. She explained that this was a first for her; in the past she had remained silent and felt that her silence was a sign of disapproval. She shared the following scenario with her peers during the focus group discussion: “As soon as I returned home I went to a party in my little town, and somebody said, so what was it like being around those n*####*s all the time? I looked at him and I said—you’re mistaken. I wasn’t around any n*####*s. However, I’m in the company of trash right now, excuse me. So that’s it, I finally spoke up.”

10.3. A deeper understanding of similarities and differences.

Making comparisons and recognizing differences leads to a re-evaluation of an individual’s values and often increases the desire to know more about a different culture (Sandin, Grahn, & Kronvall, 2004). Outcomes of Swedish nursing students: Field experiences in a hospital in Tanzania. *Journal of Transcultural Nursing*, 15(3), 225–230. doi: 10.1177/1043659604265122.2004). Noticing differences requires individuals to look at their personal assumptions as they begin to see unfamiliar behavior from multiple angles (M. Paige & Goode, 2009). Kokko (2011) found that making comparisons and noticing differences resulted in nursing students re-evaluating their own assumptions about other cultures and systems of value. E. Langer (1997) stated that once a person becomes aware of distinctions or differences, it may no longer be possible to view others in a stereotypical manner. The data revealed that participants also were able to see differences between cultures as well as within cultures. After visiting the Maasai, the participants were able to see different subcultures within Tanzania, and this helped them see that not all people of a cultural group are alike. Their transcripts and comments demonstrated their belief that people cannot take information learned about a particular culture and assume that it applies to everyone within that culture. The participants were able to see that, while people from one culture share similar behaviors and beliefs, each person and culture is also very unique. The participants concluded the following: “I think this trip brought out the best in all of us; it made us stop and rethink how we approach people.” “I never even gave it a second thought before, but now I stop and think a lot more before I act.” One participant expressed the desire to reflect and think before she responds; “I realize that I need to take time and think about things more, before I come to a conclusion about people or things.”

10.4. An enhanced awareness of “others” and the development of cultural empathy.

The fourth theme identified from the data was greater cultural empathy as the participants began to understand the complexity of the Tanzanian culture. Empathy is the desire and feeling that provides understanding and energy for helping other people (Rasoal, Eklund, & Hansen, 2011). Cultural empathy is the ability to connect with others and to understand the feelings, thoughts, and behaviors of individuals from different cultural backgrounds (Campinha-Bacote (2002). Developing empathy significantly reduces prejudice and enhances intercultural learning (Bennett, 2009), and is also identified as a cultural skill by Campinha-Bacote (2002). Most participants were touched by the plight of the patients with HIV and verbalized empathy when interacting with the patients that were HIV positive. The participants stated, “the men and women were so happy that we were willing to eat with them, dance with them and hug them . . . that really hurts!” “As soon as we arrived, they began cheering because we came to spend time with them. I had to walk away because I started to cry.”

10.5. *A sense of loss ensued after returning home.*

The return home was not without difficulties, and through participant descriptions, “a sense of loss” emerged as the fifth theme. This resulted from re-entry shock, which can pose a challenge to one’s self-concept; and the sojourner often experiences a sense of loss (Cushner, 2004; Wang, 1997). Re-entry shock created an overwhelming and stressful environment for the participants (Cushner et al., 2003). All but one of the participants had re-entry acculturation issues, such as depression and anger, which extended into the subsequent semester. As one student stated, “I was not prepared for the exhaustion, stomach upset and depression, of which I have experienced for several weeks now. I can’t seem to pull myself out of this slump. I fight to get through the day without a nap.”

10.6. *Descriptions of the international cultural experience as life-changing; the development of cultural humility*

The final theme from the first research question was that this trip was life-changing and data supported the development of cultural humility. Most significantly, the participants began to understand the shortcomings of an ethnocentric belief system: “I think it helped to broaden my beliefs . . . and I think it opened me up a lot in that respect.” “I learned that there are so many different cultures and ways of life . . . we do not have the right to force our culture and our beliefs on anyone.” The life-changing experience reported by the participants was one that helped them grasp the “big picture.” They were able to see a world outside of themselves (Read, 2011).

The uniqueness of cultural humility is that it does not have an endpoint as seen with cultural competence; the goal is not to become proficient in mastering another culture. Instead, it is the on-going life-long commitment to self-evaluation and self-critique that explores and addresses power imbalances. This life-changing experience has the possibility of immediate, intermediate effects and long-term growth. The immediate benefits of intercultural learning can be seen through the acquisition of cultural skills and the development of cultural humility when interacting with a different culture. An intermediate effect would be transfer of knowledge from what was learned in Tanzania to other cultural environments. Long-term effects should result in a permanent awareness and respect for cultural differences especially when caring for patients (M. J. Bennett, 2009). Cultural humility represents openness to new ideas and contradictory information, and demonstrates a readiness to accurately evaluate our views and our limitations as we acknowledge our gaps in knowledge (Levi, 2009; Tangney, 2000).

11. **Implications**

Research on short-term international cultural experiences remains underdeveloped, and yet it is the largest growing format for study abroad programs. This study enhanced the literature by confirming the results of previous studies on the efficacy of short-term programs. The findings from this study support and extend the sparse literature on short-term international cultural experiences of less than two weeks by demonstrating that a short-term program of 8 days can lay the groundwork for the development of intercultural/transcultural growth and cultural humility. Short-term international cultural experiences programs provide more options for university students by limiting costs, as well as time away from home and studies. This short-term study abroad program identified gains in self-awareness and leadership skills, which can serve as a springboard for further learning and meaning making. In particular, through meaning making, the participants may be better able to focus on a greater understanding of social issues, privilege, and stereotyping, as well as reframing what it means to be a professional nurse.

Despite the significant role of cultural humility in cultural competence, there is limited and almost absent research focusing on the concept of cultural humility in research of international study experiences. One study (Foster, 2009) linking cultural humility with immersion experiences stated that cultural humility can be developed through immersion programs in a foreign nation where health disparities are manifested widely, and can provide the participants with a social justice orientation. Foster examined these disparities within a *long-term* immersion experience. A qualitative study by Griswold, Zayas, Kernan, and Wagner (2007) investigated cultural humility and awareness through medical student encounters with refugees. The exposure to the refugees was limited to one encounter. This study found that cultural diversity training with hands-on multicultural clinical experiences increased students’ cultural sensitivity, competence, and cultural humility. Communication was important for the development of therapeutic relationships with patients. The ability to listen to members of a different culture provided an invaluable opportunity to learn about another culture. Most importantly, the personal and trusting relationship that ensued supported the development of cultural humility. This study was limited by sample size and by the lack of documentation of previous cultural experiences by the participants.

The above implications challenge researchers to rethink the value of short-term experiences. This study has shown that program length for international cultural experiences alone is not sufficient to result in positive learning outcomes by college students; rather the pedagogical approach is as significant as duration and greatly influences learning regardless of program length. This study found that deliberate and well-planned pedagogy and guided reflection as seen with the short-term program resulted in cultural humility, growth and change for the participants. The results of this research is supported by a previous study conducted by the Georgetown Consortium which reported that the pedagogical approach and intervention in the learning process was much more important than the length of the sojourn (Vande Berg, 2009). In addition, the “Allport Effect,” which was identified in the Georgetown Consortium study (Vande Berg, 2009), found that any sojourn exposure is likely to result in a decrease of stereotyping and prejudice. This was demonstrated by four of the eight participants in this study. In fact this was one of the most profound outcomes, when several participants began to understand their role in combating stereotyping and racist behaviors in others as well as themselves.

14. Future International Cultural Experiences

Short-term international cultural experiences can provide participants with a unique opportunity to reach out into the world and to gain a more global perspective and worldview. Acquiring cultural humility is the first step along the journey toward intercultural and transcultural proficiency. Cultural humility recognizes that growth toward intercultural competence requires a lifelong journey of learning about and experiencing other cultures (Tervalon & Murray-Garcia, 1998). According to Miller (2009), we have begun to shift our focus from cultural sensitivity, which was a helpful way of approaching individuals who held diverse health beliefs, to cultural competence, which focuses on the ability of nurses to interact work together capably with people of distinctive cultures, to cultural humility.

Maxine Greene (1988) urged educators to recognize that there are “always multiple perspectives and multiple vantage points” (p. 128), and that no learning or exploration can ever be finished or complete. “There is always more . . . there is always possibility . . . [that people] have the capacity when authentically attended to . . . to hear and see what they would not ordinarily hear and see” (p. 129). Educators have the responsibility to open up the world for students to examine the familiar and then to explore visions of consonance and dissonance that are unfamiliar in order to transfigure and transform thinking and acting by the individual (Greene, 1988).

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A research on book reading habits and media literacy of students at the faculty of education

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Abstract

This study aims to investigate the book reading habits and media literacy of students at the faculty of education, in terms of different variables. In this context, we carried out a research to see whether there is a relation between the book reading habits and media literacy of students and their departments, grades, habits of using social media, academic grade point averages, and educational background of their parents. In addition, we scrutinised the correlation between their reading habits and media literacy and to what extent these variables account for each other. The results were obtained by using the “Attitude Scale towards Reading Habit” developed by Gömleksiz (2004) and the “Media Literacy Scale” developed by Korkmaz and Yeşil (2011). According to the results of this study, attitudes of female students towards reading are higher than those of male students. While there is a positive correlation between the reading habits, grade point averages and media literacy, there is a negative correlation between the reading habits and social media using habits. We could not notice any relation between the reading habits of students and the educational background of their parents. Likewise, there was not any relation between the social media using habits of students and the educational background of their parents, whereas there was a low-level correlation between their media literacy and grade point averages.

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Peer-review under responsibility of the Sakarya University.

Keywords: Book Reading Habit; Media Literacy.

1. Introduction

Reading is one’s mental process towards a text. In its narrow sense, reading means analysing a text composed of letters and trying to interpret it as a whole. In a larger sense, reading is the reader’s appropriating a literary text for himself. In other words, it is a process through which one internalises what he reads and makes use of it in every stage of his life. In this sense, reading is the most effective learning activity through which an individual can improve himself in terms of critical thinking, developing new and different perspectives, understanding himself and the world, and interpreting the events and situations he is going to encounter.

Reading is defined as a process of perceiving printed and written words through sense organs, interpreting and comprehending them, a mental and intellectual acquisition, a communicative activity with printed and written symbols, a reception, interpretation, and reaction process consisting of some perceptual and cognitive activities. (Yağcıoğlu & Değer, 2002: 34). According to Wallace (1992: 4), reading means that the reader tries, for a particular purpose, to understand the texts written by the author for a particular communicational purpose.

“A reader ... should imagine what he is reading, understand what is argued in the text he is reading, comprehend the liaison between the thoughts in it, organise them by comparing with what he has accumulated so far, restructure his present knowledge with what he has read, and sort out what he wants to keep in his mind.”

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(Adalı, 2011: 7-8) This is possible only if the reader interprets, evaluates, and adopts a critical attitude while he is reading.

An individual envisages while reading and evaluates the thoughts in a text. Therefore, teaching reading is an important focal point of education. Pointing out the importance of teaching reading, Yalçın (2002: 51) argues that every stage of it should be handled studiously with scientific data. According to Yalçın, this depends on not only the efforts of teachers but also the arrangement of coursebooks and educational materials in a proper way.

Harvey and Goudvis (2007) define reading as thinking and understanding. By way of it, students can develop a structure and a strategy including the stages of activation, attribution, interrogation, visualisation, deduction, summarisation, and synthesis. From this point of view, students are expected to develop a positive attitude towards reading in order to think and read critically.

People need to be more selective and to behave more critical due to the intense flow of information to which they are exposed excessively in today's information society. It is impossible to say that all information given in the media is unbiased. It is seen that habits of watching television and using Internet prevail against the information obtained by reading or at school. This situation makes media literacy more important.

Media literacy is not a concept that is agreed on by all (Hamot, 1997). It is called alternatively as "Media Education" or "Media Awareness" (Thoman, 2008) in the relevant literature.

Today, people are expected to use mass media actively. As an educational process to help students use mass media effectively and consciously in this perspective, Media Literacy has been taught in schools as an elective course since the 2007-2008 education year. This course aims to make students be able to follow the media in a critical way for their life.

There are different definitions concerning the concept of media literacy in the relevant literature. While Thoman (1999: 50) defines media literacy as an ability to derive visual and verbal symbols from television, newspaper, radio, computer, magazine and advertisements which we encounter in our everyday life, Cantor and Wilson (2003: 363) defines it as maintaining a critical thinking ability against media violence and questioning the applications, messages and impacts of media. According to Luke (1999: 622), media literacy means integrating the abilities of media reading, following, speaking and listening with the thinking ability. Aufderheide (1993) defines it as the ability to access, analyse, evaluate and convey messages in "a variety of written and unwritten forms" (television, video, cinema, advertisements, Internet etc.). Likewise, Thoman and Jolls (2008: 33) defines media literacy as the ability to access, analyse, evaluate and create various forms of media.

Media literacy is defined as the ability to access, analyse, evaluate and convey messages in a great variety of written and unwritten forms (television, video, cinema, advertisements, Internet etc.) (Gomez & Gomez, 2007; Manzo, 2007).

Although the above-mentioned definitions of media literacy are different from each other and focus on different aspects of the concept, these definitions commonly point out the critical attitude of people towards whatever they read, watch and listen.

It can be said that the focal point of media literacy is to analyse, to evaluate, and to maintain a questioning attitude towards what we read and listen in printed and visual media.

Hobbs (1998) points out two aspects of media literacy evaluated by academicians and educators. The first one is critically analysing messages in the media and the second one is an individual's learning to produce his own messages. Hobbs refers to critical media literacy in the first aspect and the ability to produce media messages in the second aspect.

According to De Gaetano (2010), five basic skills are observed if an awareness of media literacy is entrenched. These are as follows:

1. Conscious and appropriate use of screen technology,
2. Ability to critique visual messages and understand their intellectual and emotional impact,
3. Ability to communicate facts, ideas, and thoughtful opinions about media images,
4. Ability to thoroughly understand media production techniques (camera angles, lighting, cuts, etc.) to fully appreciate how individuals are affected by the messages being delivered,

5. Ability to use all forms of screen technology purposefully and wisely.

As a consequence, media literacy is an important concept in terms of developing a media awareness among students and raising individuals who are able to critically view, question and evaluate the information delivered in mass media, instead of being a passive receiver and maintaining a passive attitude in front of printed and audio-visual media. In this way, children can read and view the media critically, reach a cognitive level in analysing the media language and code, and become active individuals in the process of communication instead of being passive receivers of the messages delivered in an uncontrolled way in mass media (RTÜK, 2007).

This research was carried out to investigate the book reading habits and media literacy levels of students at the faculty of education, with different variables. We try to answer the following questions:

1. Do the book reading habits and media literacy levels of students differ in terms of their gender?
2. Do the book reading habits and media literacy levels of students differ in terms of their departments?
3. Do the book reading habits and media literacy levels of students differ in terms of their grades?
4. Do the book reading habits and media literacy levels of students differ in terms of their parents' educational background?
5. Are the book reading habits and media literacy levels of students related to their social media using habits?
6. Are the book reading habits and media literacy levels of students related to their grade point averages?
7. Are the book reading habits of students related to their media literacy levels?

2. Method

This study aims to analyse the book reading habits and media literacy levels of students at the faculty of education in relation to gender, grade, department, educational background of their parents, grade point averages and social media using habits. Relational screening model was used in the study. *“Relational screening models are research models aiming to determine the existence and/or the degree of covariance between two or more variables.”* (Karasar, 2008: 81). The data required was obtained by way of a personal information form developed by the researcher, the “Attitude Scale towards Reading Habit” developed by Gömleksiz (2004) and the “Media Literacy Scale” developed by Korkmaz and Yeşil (2011). The research was conducted in Ahi Evran University Faculty of Education in the 2013-2014 education year. The research sample is composed of 743 preservice teachers receiving education in the departments of Turkish Teaching, Primary School Teaching, Science Teaching, Social Sciences Teaching and Elementary Mathematics Teaching.

While assessing the data collected in line with the aims of this research, we carried out frequency, arithmetic mean, standard deviation, t-test, one-way ANOVA, Scheffe's test, and correlation analyses. We used SPSS 15.0 in analysing the data and assumed a significance level of 0.05 while interpreting the data.

3. Findings

In this section, we elaborated the results based on the data collected in accordance with the sub-problems of this research.

Table 1 Analysis Results of Independent t-Test between Point Averages of Students in Relation to Gender and the Attitude Scale towards Reading Habit

Gender	N	\bar{X}	Std. Deviation	T-value	Significance Level (p)
Male	250	3,99	,588	-5,350	,000
Female	493	4,21	,482		

When Table 1 is examined, it is seen that averages of students in the Attitude Scale towards Reading Habit statistically differ to a significant extent in terms of gender variable ($p < 0,05$). This situation shows that reading habits differ by gender, and attitudes of female students towards reading are higher than those of male students.

Table 2 Analysis Results of Independent t-Test between Point Averages of Students in the Media Literacy Scale in Relation to Gender

Gender	N	\bar{X}	Std. Deviation	T-value	Significance Level (p)
Male	250	4,01	,558	,828	,408
Female	493	3,97	,507		

When Table 2 is examined, it is seen that media literacy levels of students do not differ significantly in statistical terms according to gender ($p > 0,05$). This means that media literacy of students does not differ with respect to their gender.

Table 3 Results of One-way Analysis of Variance (ANOVA) Regarding the Points Students Scored in the Attitude Scale towards Reading Habit According to Their Departments

Variable	Department	N	\bar{X}	SS			
Departments They Study in	Turkish	147	4,28	,448			
	Social	118	4,19	,516			
	Science	112	4,02	,532			
	Primary School	108	4,20	,492			
	Mathematics	138	3,99	,594			
	Computer Tech.	120	4,11	,535			
	Source of Variance	Sum of Squares	Sd	Mean of Squares	F	p	Significant Difference
Intergroup	8,242	5	1,648	6,062	,000	Exists	
Intragroup	200,408	737	,272				
Total	208,649	742					

When Table 3 is assessed, it is seen that there is a significant difference between the department in which the sample group students receive education and their attitudes towards reading habit ($p < 0,05$). In order to find out which department causes this significant difference, Scheffe's test was applied and its results are presented in Table 4.

Table 4 Scheffe's Test Results of Multiple Comparison Regarding the Points Students Scored in the Attitude Scale towards Reading Habit According to Their Departments

		(I-J)	SD	P
(I) Departments	(J) Departments	Sum of Squares	F-value	Significance Level (p)
Scheffe	Scial	,09549	,06445	,821
	Science	,25843	,06540	,008
	Primary School	,08298	,06609	,904
	Mathematics	,29044	,06181	,001
	Computer Tech.	,17286	,06415	,203

According to these results, it is seen that there is a significant difference between the sample departments of Turkish Teaching, Science Teaching and Mathematics Teaching in terms of their attitudes towards reading

($p < 0,05$). This difference is in favour of Turkish Teaching Department. There is not any significant difference between the other departments in relation to their attitudes towards reading habit.

Table 5 Results of One-way Analysis of Variance (ANOVA) Regarding the Points Students Scored in the Media Literacy Scale According to Their Departments

<i>Variance</i>	<i>Department</i>	<i>N</i>	\bar{X}	<i>SS</i>			
Departments They Study in	Turkish	147	4,01	,546			
	Social	118	4,03	,543			
	Science	112	3,84	,482			
	Primary School	108	3,90	,506			
	Mathematcs	138	3,92	,493			
	Computer Tech.	120	4,18	,510			
Source of Variance	Sum of Squares	Sd	Mean of Squares	F	p	Significant Difference	
Intergroup	8,581	5	1,716	6,458	,000	Exists	
Intragroup	195,869	737	,266				
Total	204,450	742					

When Table 3 is examined, it is seen that there is a significant difference between the departments students and their media literacy ($p < 0,05$). In order to see which department causes this significant difference, Scheffe's test was applied and its results are presented in Table 6.

Table 6 Scheffe's Test Results of Multiple Comparison Regarding the Points Students Scored in the Media Literacy Scale According Their Departments

		(I-J)	SD	P	
(I) Departments	(J) Departments	Sum of Squares	F-value	Significance (p)	Level
Scheffe	Turkish	,16969	,06342	,211	
	Social	,14799	,06684	,429	
	Science	,33995	,06773	,000	
	Primary School	,27675	,06838	,006	
	Mathematics	,26047	,06435	,006	

According to these results, there is a significant difference in terms of media literacy between the sample departments of Computer Education and Instructional Technology, Science Teaching, Primary School Teaching, and Mathematics Teaching ($p < 0,05$). This difference is in favour of Computer Education and Instructional Technology. There is not any significant difference in terms of media literacy between the other departments.

Table 7 Results of One-way Analysis of Variance (ANOVA) Regarding the Points Students Scored in the Attitude Scale towards Reading Habit According to Their Grades

<i>Variable</i>	<i>Grade</i>	<i>N</i>	\bar{X}	<i>SS</i>
Grades	1. Grade	4,13	,513	,035
	2. Grade	4,19	,491	,043
	3. Grade	4,11	,548	,037
	4. Grade	4,12	,552	,039

	Source of Variance	Sum of Squares	Sd	Mean of Squares	F	p	Significant Difference
	Intergroup	,610	3	,203	,722	,539	Does not exist
	Intragroup	208,039	739	,282			
	Total	208,649	742				

When Table 7 is analysed, it is seen that there is not any statistically significant difference between the attitudes towards reading and the grades of students as p-value is >0,05.

Table 8 Results of One-way Analysis of Variance (ANOVA) Regarding the Points Students Got from the Media Literacy Scale According to Their Grades

Variable	Grade	N	\bar{X}	SS			
Grades	1. Grade	3,99	,540	,037			
	2. Grade	3,99	,516	,045			
	3. Grade	4,01	,526	,035			
	4. Grade	3,94	,512	,037			
	Source of Variance	Sum of Squares	Sd	Mean of Squares	F	p	Significant Difference
	Intergroup	,540	3	,180	,652	,582	Does not exist
	Intragroup	203,910	739	,276			
	Total	204,450	742				

When Table 8 is assessed, it is seen that there is not any statistically significant difference between the media literacy and the grades of students as p-value is >0,05.

Table 9 Analysis Table of Correlation between the Variables, Reading Habit and Media Literacy

		Reading	Media Literacy	Grade Point Averages	Educational Status of Mother	Educational Status of Father	Social Media Using Habit
Reading	r	1	,437**	,111**	-,058	-,039	-,082*
	p		,000	,002	,112	,294	,025
	n	743	743	743	743	743	743
Media Literacy	r	,437**	1	,116**	-,018	,028	-,040
	p	,000		,002	,623	,450	,271
	n	743	743	743	743	743	743
Grade Point Averages	r	,111**	,116**	1	-,013	,002	-,082*
	p	,002	,002		,733	,954	,025
	n	743	743	743	743	743	743
Educ. Status of Mother	r	-,058	-,018	-,013	1	,451**	,017
	p	,112	,623	,733		,000	,652
	n	743	743	743	743	743	743
Educ. Status of Father	r	-,039	,028	,002	,451**	1	,036
	p	,294	,450	,954	,000		,322
	n	743	743	743	743	743	743
Social Media Using Habit	r	-,082*	-,040	-,082*	,017	,036	1
	p	,025	,271	,025	,652	,322	
	n	743	743	743	743	743	743

*. Correlation is significant at the level of 0,05.

**. Correlation is significant at the level of 0,01.

According to Table 9, there is a positively significant correlation between reading habit and media literacy ($r=,437$, $p<,01$). The correlation between these two variables indicates a medium-level relationship according to Cohen (1988) and Huck (2008). From this point of view, we can say that the higher the attitudes towards reading are, the more media literacy develops among students of the faculty of education.

When we look at the correlation between the grades of students and their attitudes towards reading in Table 9, we see that the correlation ($r=,111$, $p<,01$) between these variables indicates a low-level relationship (Cohen, 1988; Huck 2008). The correlation value between their grade point averages and media literacy indicates likewise a low-level relationship ($r=,116$, $p<,01$). In other words, there is a correlation between the attitudes towards reading, media literacy and grade point averages of students, albeit at a low level.

As for the values of correlation between the attitudes of students towards reading habit and the educational status of their parents, r -values do not indicate any relationship between these variables and the attitudes towards reading ($r=,037$; $r=0,43$).

There is a negative and low-level relationship between the attitudes of students towards reading habit and their social media habits ($r=-,082$).

Despite being at a low level, there is positive and significant relationship between the points students got from the media literacy scale and their academic grade point averages ($r=,116$, $p<,01$).

As for the values of correlation between the media literacy levels of students and the educational status of their parents, r -values do not indicate any relationship between media literacy and these variables. ($r=-,018$; $r=0,28$).

We did not find any relationship between media literacy and social media using habits of students as well ($r=-0,40$).

4. Conclusion and Discussion

Setting out to analyse the attitudes towards reading and media literacy levels of the students attending the faculty of education, in terms of different variables, we conclude that:

1. When the points the students of the Faculty of Education got from the “Attitude Scale towards Reading Habit” are analysed in terms of gender variable, it is seen that the difference between them is statistically significant ($p<0,05$). This difference is in favour of female students, which shows that the attitudes of female students towards reading are higher than those of male students.

2. When the points the students of the Faculty of Education got from the “Media Literacy Scale” are analysed in terms of gender variable, it is seen that there is not a statistically significant difference ($p>0,05$).

3. When the points the students got from the “Attitude Scale towards Reading Habit” are examined in terms of their departments, there is a statistically significant difference between the points of the students who receive education in Turkish Teaching Department and those in Mathematics and Science Teaching departments ($p<0,05$). There is not any significant difference between the points the students in the other departments got from this scale. Why the students of Turkish Teaching Department maintain higher attitudes towards reading compared to the other departments can be explained by the fact that they read more books during their education. In another saying, Turkish Teaching Department includes extensive courses of literature as well as language and education.

4. When the points the students got from the “Media Literacy Scale” are analysed in terms of their departments, we observe a statistically significant difference between the points belonging to the students in the department of Computer Education and Instructional Technology and those who receive education in the departments of Science, Primary School and Mathematics Teaching ($p<0,05$). We could not observe any significant difference between the points the students in the other departments got from the Media Literacy Scale. The students of Computer Education and Instructional Technology use computer and Internet more active

than the students of other departments . This habit is reflected in their media literacy and so they scored better in this scale.

5. When the attitudes of students towards reading habit and their media literacy are examined in terms of their grades, there is not any significant difference between the grades ($p>0,05$).

6. As for the values of correlation between the variables and the attitudes of students towards reading habit, we see that there is a positive and significant relation between reading habit and media literacy ($r=,437$, $p<,01$). This situation shows that the higher their attitudes towards reading are, the higher their levels of media literacy are. In other words, the more people read, the more critical attitude they adopt towards the events and situations they encounter. Such a critical attitude towards events and situations is key to media literacy as well. Although there is a positive and significant relation between the attitudes of students towards reading and their academic grade point averages, this relation is at a low level ($r=,111$, $p<,01$). As for the values of correlation between the attitudes of students towards reading and the educational status of their parents, r-values show that there is not a relation between these variables ($r=,037$; $r=0,43$). There is a negative and low-level relation between the attitudes of students towards reading and their social media using habits ($r=-,082$). This relation can be interpreted as an indicator of the fact that the higher the attitudes of students towards reading are, the higher their levels of media literacy will be.

7. Although there is a positive and significant relation between the students' grade point averages and the points they scored in the media literacy scale, this relation is at a low level ($r=,116$, $p<,01$). As for the values of correlation between the media literacy levels of students and the educational status of their parents, r-values do not indicate a relation between these variables ($r=-,018$; $r=0,28$). We could not observe any relationship between the media literacy and social media using habits of students ($r=-0,40$).

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A Research on Reading Habits of University Students (Sample of Ankara University and Erciyes University)

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Abstract

The activity of reading of an individual, which commences together with the beginning of school age and continues throughout their lifetime, is also the basic tool of learning. After acquiring basic skills pertaining to reading, ensuring that these skills are permanent, sustained throughout life, and transition to functional and critical literacy is closely related to the reading habit of the individual. In individualistic terms, the habit of reading is also one of the most important foundations of a robust and developed personality. In the world of today where knowledge is increasing rapidly and science and technology impose constant changes to human life, it is observed that humans constantly need to improve themselves in both their professional and social lives. In occupational and career development after formal education, especially for the purpose of being able to adapt to change, education and lifelong learning has become a necessity. University students are groups that are expected to have a high level of reading habit, which is among the individual and social development criteria. Thus, the determination of reading habits of university students is considered important in both areas they need and in their self developments throughout their lives.

This study has the objective of determining the reading habits of students studying at the Ankara University Department of Primary Education and Erciyes University History Department. To that end, data of questionnaires applied to a total of 326 students consisting of 225 students from Ankara University and 101 students from Erciyes University have been analyzed and the results have been presented in the form of tables.

According to the data obtained in the study, it has been determined that students at Ankara University and Erciyes University read novels, newspapers and magazines in their spare time, they enjoy reading literary works, historic, romantic, entertaining-humorous, and psychological genres the most, and they could not spare much time for reading books due to the intensity of lessons, busy social life, preparation for examinations and spending time on the computer/internet.

Keywords: Reading, reading habit, university students.

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Peer-review under responsibility of the Sakarya University.

Introduction

In the world of today, where change is inevitable, just as it is in every area, rapid change is being experienced in information, information resources, and access to information. It is a fact that a person, who keeps their knowledge up-to-date, and not a person, who is just knowledgeable, shall adapt easily to this change and be successful in every field. When it is considered that a significant proportion of acquired knowledge is acquired through reading, the importance of reading in adapting to this changing age can be better understood. Reading, which has been defined as “the process of the brain evaluating and making sense of signs and symbols perceived through the eyes” (Özbay, 2007:4), is a complex process that consists of various stages of development. Above all, it is a process of perceiving where symbols are recognized (Bamberger, 1990:10). Having reading become a habit and sustaining it throughout life is among the basic objectives of education

A habit is a characteristic behavioral pattern that is learnt and reinforced in a manner realized in every case automatically (Blaha & Bennett, 1993:86). Habits enter our lives at a slow pace and become established after a certain period. If habits are not quitted, in time they become needs (Aksaçoğlu, 2005). When reading, which is the basic manner of acquiring information, is transformed into a habit, another notion called “reading habit” comes into being. The habit of reading is the act of reading being carried out throughout life in a constant, regular and critical manner as a result of it being perceived by the individual as a need and source of pleasure (Yılmaz, 1993). The habit of reading is the basis of lifelong learning. For the purpose of the individual being

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someone that learns throughout his/her life, it is necessary for the act of reading to be conducted regularly throughout life (Odabaş, Odabaş & Polat, 2008). The university period, which is the most intense stage of formal education, is a period when young people carry out the act of reading the most frequently and necessarily. In terms of the conditions it creates, this period is an advantageous period for the acquisition of enjoying, awareness and consciousness in reading (Yılmaz, Köse & Korkut, 2009:23). University youth is the youth group consisting of people aged between 17-25, who are receiving education at the final stage of formal education, are inquisitive and have acquired a scientific mentality, have created a unique youth culture, and are going to be leaders of society. The fact that they are knowledgeable, administrator and decision maker candidates of the future, is the most important characteristic that makes university youth distinct from other youth groups (Yazıcı, 2003:13).

The quality of the interest in reading and habit of reading of teacher candidates among university students is of critical significance in terms of them being examples for children and young people (Saracaloğlu et al., 2003:150). Studies indicate that with a proportion of 70.7%, teachers are the ones who influence children the most in acquiring the habit of reading. Similarly with a rate of 33.0%, teachers are the ones who give their first books to students (Tosunoğlu, 2002:556-558). Teachers continue to be models even after they have acquired children with the habit of reading. As it can be observed, as it is in all areas of education, in this area it is also teachers who have the role of being a model, laying foundations, and formalizing the new generation. Another department among university students where reading habits are perceived to be important is history. This is because history is a branch of science where reading is of particular importance. Students studying history are expected to improve themselves as individuals that explore, interpret, question and can think critically. Therefore, reading habits become crucial in students acquiring and developing these skills.

In the world of today, where knowledge is rapidly increasing and science and technology have caused changes in human life to be necessary, it can be observed that it has become compulsory for humans to continually improve themselves in both their professional and social lives. In our age, where education and "lifelong learning" have become a must for professional and career development after formal education and especially adapting to change, it is expected that university students have the habit of reading, which is among the criteria of social and individual development, at a high level. Thus, the determination of reading habits of teacher candidates and persons receiving education in the field of history, among university students, in areas they need and improving themselves throughout their lives has been considered to be important.

1. Purpose of the Study

The purpose of this study is to determine the reading habits of teacher candidates at Ankara University and students studying at the History Department at Erciyes University.

Method

2.1. Model of the study

The survey model has been utilized in the study. In the survey model, an existing circumstance is aimed to be described as it is and no effort is made in any manner to change, or influence it (Karasar, 2003:77).

2.2. Study Group

There are a total of 326 students in the study group consisting of 225 teacher candidates in years 3 and 4 of the Ankara University Faculty of Educational Sciences Department of Primary Education and 101 students studying in years 3 and 4 at the Erciyes University Faculty of Sciences and Arts History Department during the 2013-2014 academic year.

2.3. Data Collection Tool

As a data collection tool in this study, a questionnaire developed by researchers through a review of the related literature has been used. There were questions in the questionnaire oriented at determining the personal details and reading habits of students. A preliminary trial of the questionnaire has been performed prior to implementing the questionnaire to the students in the study group. In this process, the questionnaire form has been applied to 50 students attending the 2nd year of the Ankara University Department of Social Studies Teaching. The response of teacher candidates to the questionnaire have been examined by itemizing the data of the questionnaire form, whose preliminary trial has been performed, the necessary corrections have been made on the questionnaire and the questionnaire form had been finalized.

2.4. Collection and analysis of the data

The study was performed in the spring semester of the 2011-2012 academic year. The data obtained in the study has been analyzed with the SPSS 16.0 (Statistical Package for the Social Sciences) statistics program. Data obtained as a result of the analysis, have been interpreted after being presented in the form of tables.

Findings and Interpretations

In this section, the personal details of a total of 326 students in the study group, consisting of 225 students from Ankara University and 101 students from Erciyes University, have been presented and the response of students to the questionnaire have been presented in the form of tables and analyzed and interpreted.

Table 1. Distribution of students participating in the study according to gender

	Ankara University		Erciyes University		Total	
	n	%	n	%	n	%
Female	145	64	48	48	193	59.2
Male	80	36	53	52	133	40.8
Total	225	100	101	100	326	100

As it can be observed in Table 1, 64% of students participating in the study from Ankara University are females and 36% are males whereas 48% of participants from Erciyes University are females and 52% are males. While the number of students from Erciyes University can be considered to be at an equal rate according to gender, it can be said that the number of female students at Ankara University is nearly twice as much as males. This can be interpreted as the profession of teaching being widely preferred by females.

Table 2. Distribution of students participating in the study according to their class of education

Class level of education	Ankara University		Erciyes University		Total	
	n	%	n	%	n	%
Year 3	127	56	61	60	188	57.7
Year 4	98	44	40	40	138	42.3
Total	225	100	101	100	326	100

As it can be observed in Table 2, 56% of students participating in the study from Ankara University are attending year 3 and 44% of students are attending year 4 whereas 60% of students participating from Erciyes University are attending year 3 and 40% are attending year 4. It can be said that the distribution of students participating from both universities are almost the same in terms of their year of education.

Table 3. Distribution of student responses on what they prefer to read in their spare time*

The most preferred items for reading in spare time	Ankara University		Erciyes University		Total	
	n	%	n	%	n	%
Novel	151	67,1	53	52,5	204	62,6
Newspaper	130	57,8	58	57,4	188	57,7
Magazine	68	30,2	23	22,8	91	27,9
Exam Preparation Books	53	23,6	32	31,7	85	26,1
Poems	46	20,4	15	14,9	61	18,7
Articles	20	8,9	26	25,7	46	14,1
Other	25	11,1	15	14,9	40	12,3

* As students could mark more than one option, each option has been assessed separately within itself but presented in the same table. This case also applies for some of the other tables.

When table 3 is examined, it can be observed that students at Ankara University and Erciyes University read novels, newspapers and magazines the most in their spare time. Students at Ankara University prefer to read magazines and poems more than Erciyes University students. It can be observed that students at Erciyes University prefer to read Examination Preparation Books more than students at Ankara University.

Table 4. Distribution of responses of students on the book genres they enjoy reading the most

Book Genres that enjoyed most for reading	Ankara University		Erciyes University		Total	
	n	%	n	%	n	%
Literary works (novel, story, poem)	152	67,6	57	56,4	209	64,1
Historic	94	41,8	81	80,2	175	53,7
Romantic	87	38,7	37	36,6	124	38,0
Entertainment-humor	99	44,0	23	22,8	122	37,4
Psychology	88	39,1	18	17,8	106	32,5
Personal development	69	30,7	26	25,7	95	29,1
Politics	63	28,0	32	31,7	95	29,1
Adventure	56	24,9	24	23,8	80	24,5
Religious	52	23,1	27	26,7	79	24,2
Crime Novel	56	24,9	17	16,8	73	22,4
Culture Arts	49	21,8	21	20,8	70	21,5
Science Fiction	47	20,9	23	22,8	70	21,5
Education	57	25,3	11	10,9	68	20,9
Philosophy/thought	56	24,9	8	7,9	64	19,6
Horror	36	16,0	16	15,8	52	16,0
Essay	39	17,3	4	4,0	43	13,2
Professional	35	15,6	5	5,0	40	12,3
Popular science	28	12,4	7	6,9	35	10,7
Sociology	24	10,7	4	4,0	28	8,6
Economy	9	4,0	3	3,0	12	3,7
Other	9	4,0	3	3,0	12	3,7

When the data in Table 4 is analyzed, it can be observed that students at Ankara University and Erciyes University enjoy reading literary works, historic, romantic, entertainment-humor, and psychology book genres the most. These findings of the study demonstrate similarity with the findings of Yılmaz (2009:157), Yılmaz, Köse & Korkut (2009:34-35) and Sevmez (2009:48).

Nearly all of the students at Erciyes University enjoy reading historic books the most. It can be said that while students at Erciyes University enjoy historic, political, and religious books more than students at Ankara University, students at Ankara University enjoy books on education, psychology, philosophy/thought and profession more than students at Erciyes University. This can be interpreted as university students enjoying books related to their field of education more.

Table 6. Distribution of the response of students in relation to them prioritizing Turkish or world *literature*

Prioritization of Turkish or world literature	Ankara University		Erciyes University		Total	
	n	%	n	%	n	%
No differentiation	138	61,3	53	52,5	191	58,6
Turkish literature	46	20,5	41	40,6	87	26,7
World literature	41	18,2	7	6,9	48	14,7
Total	225	100	101	100	326	100

According to the data in Table 6, it can be observed that a majority of students at Ankara University and Erciyes University do not make a differentiation between Turkish and world literature. However, it can be observed that in both universities there are more students that prefer Turkish literature over world literature. These findings of the study demonstrate differences to those of Kolaç's (2007:17). According to Kolaç's study, it is stated that 45.7% of primary school teacher candidates prefer Turkish literature.

Table 7. Distribution of responses of students with regards to the means of obtaining books

Means of obtaining books for reading	Ankara University		Erciyes University		Total	
	n	%	n	%	n	%
Purchasing	180	80,0	73	72,3	253	77,6
Borrowing from friends	84	38,3	33	32,7	117	35,9

Borrowing from libraries	86	38,2	28	27,7	114	35,0
Other	13	5,8	6	5,9	19	5,8

When the data in Table 7 is examined, it can be observed that students in both universities obtain books they intend to read by means of purchasing them. From the data in the table, it can be inferred that distribution of the rates of the means of obtaining books for students of both universities are similar. This finding of the study is similar to the findings of Sevmez (2009) and Yılmaz, Köse & Korkut (2009) (Sevmez, 2009:58; Yılmaz, et al., 2009:36).

Table 10. Distribution of student responses concerning them enjoying reading books/periodicals

Status of enjoying reading books/periodicals	Ankara University		Erciyes University		Total	
	n	%	n	%	n	%
Yes	147	65,3	56	55,4	203	62,3
No	17	7,6	10	9,9	27	8,3
Partially	61	27,1	35	34,7	96	29,4
Total	225	100	101	100	326	100

According to Table 10, a majority of students at both Ankara University and Erciyes University have stated that they enjoy reading books/periodicals. It can be inferred that the distribution rates of enjoying reading books/periodicals demonstrate similarity for both universities.

Table 11. Distribution of responses concerning the last time the students purchased a book

Time of last book purchase	Ankara University		Erciyes University		Total	
	n	%	n	%	n	%
Within the last month	95	42,2	40	39,6	135	41,1
Within the previous month	67	29,8	29	28,7	96	29,4
Within the last three months	35	15,6	15	14,9	50	15,3
Can not remember	28	12,4	17	16,8	45	13,8
Total	225	100	101	100	326	100

According to the data in Table 11, nearly half of students both at Ankara University and Erciyes University stated that they purchased a book within the last month. This finding of the study varies from the findings of Yılmaz, Köse & Korkut (2009:42). According to the results of the study of Yılmaz et al, a large proportion of the students of Hacettepe and Bilkent Universities (40.4%) stated that they last purchased a book within the “previous month”. It is striking that the distribution of the last book purchasing date intervals for students of both universities are similar.

Table 12. Distribution of student responses concerning the frequency of reading books

Book reading frequency	Ankara University		Erciyes University		Total	
	n	%	n	%	n	%
Never read	11	4,9	9	8,9	20	6,1
One or less books within 2 months	70	31,1	29	28,7	99	30,4
1 book a month	99	44,0	41	40,6	140	42,9
Two or more books a month	45	20,0	22	21,8	67	20,6
Total	225	100	101	100	326	100

According to the data in Table 12, it can be observed that nearly half of the students at Ankara University and Erciyes University, read one book a month. The distribution for students at both universities demonstrated similarity in terms of book reading frequency.

These findings of the study demonstrate differences from those of Kolaç (2007) and Yılmaz’s (2009). According to Kolaç’s study, primary school teacher candidates have notified that they read one book a month at a rate of 1% (Kolaç, 2007:10). According to the study of Yılmaz, students of the Turkish education department read around four books a month (Yılmaz, 2009:156-157).

Table 13. Distribution of student responses concerning the frequency of reading periodicals

Reading frequency of periodicals	Ankara University		Erciyes University		Total	
	n	%	n	%	n	%
Every day	62	27,6	34	33,7	96	29,4
Once in a couple of days	91	40,4	23	22,8	114	35,0
Once a week	29	12,9	16	15,8	45	13,8
Less frequently	39	17,3	22	21,8	61	18,7
Never	4	1,8	6	5,9	10	3,1
Total	225	100	101	100	326	100

According to the data in Table 13, the number of students reading periodicals everyday was higher at Erciyes University and the number of students reading periodicals everyday was higher at Ankara University. It can be said that nearly all students at both universities read periodicals every day or once in a couple of days.

Table 15. Distribution of student responses concerning the purpose(s) of reading books/periodicals

Purpose of reading books/periodicals	Ankara University		Erciyes University		Total	
	n	%	n	%	n	%
Being informed	168	74,7	80	79,2	248	76,1
Personal development	148	65,8	58	57,4	206	63,2
Keeping up-to-date	127	56,4	53	52,5	180	55,2
Making the best of spare time	89	39,6	42	41,6	131	40,2
Professional development	97	43,1	33	32,7	130	39,9
Entertainment	104	46,2	2	2,8	127	39,0
Reinforcing lessons	65	28,9	42	41,6	107	32,8
Relaxation	87	38,7	14	13,9	101	31,0
Other	7	3,1	1	1,0	8	2,5

When table 15 is analyzed, it can be observed that a majority of students of both Ankara University and Erciyes University read books/periodicals for the purposes of being informed, personal development, and keeping up-to-date. For the students of both universities, reading books/periodicals for the purposes of relaxation and reinforcing lessons are at the lowest level. Whilst the rate of reading books for the purposes of making the best of spare time and reinforcing lessons was higher among students of Erciyes University, the rate of reading books for the purposes of personal development, keeping up-to-date, professional development and, entertainment was higher among students of Ankara University.

The data obtained in this study demonstrated similarity with the findings of Yılmaz (2009:154), but varied from the findings of Yılmaz, Köse & Korkut (2009:33-34). According to the study of Yılmaz, 41% of students at the department of Turkish education stated that they read periodicals for the purpose of self development and 37% for the purpose of personal interest. According to the study of Yılmaz, Köse & Korkut, a large proportion of students attending Hacettepe and Bilkent Universities stated they read the most due to lesson related purposes.

Table 17. Distribution of responses of students concerning changes in their reading habits after coming to university

Status of change in reading habits	Ankara University		Erciyes University		Total	
	n	%	n	%	n	%
Improved	112	50	59	58	171	53
Deteriorated	55	24	12	12	67	21
No change	58	26	30	30	88	27,0
Total	225	100	101	100	326	100

When Table 17 is observed, half of students attending Ankara University and more than half of the students attending Erciyes University stated that their reading habits improved after coming to university. This finding of the study demonstrated similarity with the findings of Sevmez (2009:61).

Table 20. Distribution of student responses with regards to the reasons for not being able to spare enough time for reading

Reasons for not being able to spare enough time for reading	Ankara University		Erciyes University		Total	
	n	%	n	%	n	%
Intensity of studies	137	68,2	51	52,6	188	63,1
Busy social life	100	49,8	35	36,1	135	45,3
Preparation for examinations	99	49,3	29	29,9	128	43,0
Spending time on the computer/internet	75	37,3	30	30,9	105	35,2
Chatting with friends	64	31,8	31	32,0	95	31,9
Watching television	40	19,9	20	20,6	60	20,1
Expensive prices of books	29	14,4	14	14,4	43	14,4
Other	17	8,5	9	9,3	26	8,7

When Table 20 is examined, it has been determined that both students of Ankara University and Erciyes University could not spare time for reading books due to intensity of lessons, busy social life, preparation for examinations and spending time on the computer/internet. This finding of the study demonstrates similarity with the findings of Kolaç (2007:10-11), Yılmaz (2009:160-161), Odabaş, Odabaş & Polat (2008:449), Sevmez (2009:52) and Saracaloğlu, Bozkurt & Serin (2003).

From these findings, it can be interpreted that intense lessons and busy social life, examination preparation process, and spending time on the commuter/internet occupy an important period of time for students and this causes students to spend less time for reading.

Conclusion

The students in Ankara and Erciyes Universities read mainly novels, newspapers, and magazines in their spare time. The students in Ankara and Erciyes Universities enjoy reading literary works and history, romance, entertainment-humor, and psychology book genres the most.

Whilst the students at Erciyes University compared with the ones at Ankara University prefer reading books on history, politics, and religion, the students at Ankara University compared with the ones in Erciyes University like reading books on education, psychology, philosophy/argument, and profession.

Most of the students in both universities do not make a distinction between Turkish and world literature. The students in both universities obtain books for reading by purchasing them. Most of the students in both universities enjoy reading books/periodicals.

Almost half of the students in both universities have purchased a book within the last month. Almost half of the students in both universities read a book in a month. The number of students reading periodicals each day is higher in Erciyes University but the number of students reading periodicals once in a couple of days is higher in Ankara University. Magazines on humor and children are preferred more by the students at Ankara University but magazines on news and sports are preferred more by the students at Erciyes University.

Most of the students in both universities read books/periodicals to get informed, develop personally, and keep up-to-date. The reading habits of half of the students in Ankara University and more than half of the students in Erciyes University have developed after starting their higher education. The students in both universities cannot spare enough time to read books because of intense lessons and busy social lives, preparation for examinations and time spent on the computers/internet.

Recommendations

- Access of university students to reading materials in different genres in their spare times may be ensured.
- Activities may be organized with a view to developing the reading habits of the university students.

- University students may be encouraged to develop their reading habits.
- Among university students the ones with exemplary reading habits may deliver speeches and share their own encouraging experiences on reading books with the others.
- Activities where persons such as authors, journalists, and publishers appear as guests may be organized and the interaction of university students with them may be ensured.
- Activities may be organized for the purpose of promoting books advised by students.

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A review of the articles about TouchMath

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Abstract

According to literature, traditional instruction methods remained insufficient in teaching the mathematics skills to the students with special needs. Therefore multi sensory teaching methods must be used in teaching mathematics skills to the students with special needs. TouchMath is a one of the multisensory teaching techniques which is used to teach the mathematics skills especially number sense and four operations skills. The aim of this study is to analyse the studies using TouchMath. In this study the international databases were scanned and 27 articles were found from the databases. The articles were analyzed according to their research models, participants, dependence variables and weather using reliability, social validity, generalization, and maintenance datas. Finally the findings obtained from the articles were discussed and reported.

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Peer-review under responsibility of the Sakarya University.

Keywords: Mental Retardation, Mathematics Instruction, TouchMath

1. Introduction

Academic skills are one of the most crucial and functional abilities for the students with special needs to perform the acts required by the social norms and to live effectively and independently in the society. In daily life, it is fairly important to learn mathematics knowledge and skills by the students with special needs and these knowledge and skills should be used by the students independently like the students with normal development.

However, considering the literature derived from research findings, the students with special needs have challenges and deficiencies in achieving the goals of mathematics (Kroesbergen and Van Luit, 2003). Inasmuch as learning these skills by the students with special needs depend on the elements of their programme, organising the content and goals, using appropriate approaches and instruction methods of content. That is mathematics instruction should carry out with individualized goals, using appropriate teaching methods and instructional materials (Gürsel, 1993). This should help learning mathematics concepts and skills by the students with special needs.

Although deciding appropriate instruction approaches and methods are the first step of planning to learn mathematics by the students with special needs, it is still going on looking for an effective, reliable and systematic instruction method in teaching mathematic skills to the students with special needs (Cavkaytar, 1998). It's easily seen in the literature that some of the instruction methods are to the fore in teaching mathematics skills to the students with special needs. These are;

- Direct Instruction Method
- Interactive Unit Teaching
- Errorless Teaching Method
- CRA (Concrete-Representational-Abstract)

However being a part of cognitive skills and the apprehensions and level differences of the students with special needs are thought, it's clear that being limited by the current instructions above in teaching mathematics content and skills to the students with special needs. Therefore making instructional adaptations and using multisensory instruction methods have become more important in teaching mathematics skills in the last period (Rudolf, 2008). One of the examples that can be given to multisensory approaches is TouchMath.

1.1 TouchMath

Many researchers suggest using multisensory approaches for teaching mathematical skills (Vinson, 2004) and TouchMath responds to this need in teaching basic mathematics skills. TouchMath is a multisensory technique for teaching number sense, addition, subtraction, multiplication and division (Scott, 1993).

The TouchMath program was first developed in 1975 by an elementary school teacher Janet Bullock while searching an appropriate method to increase students success who struggling math concepts. TouchMath is a

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technique combining vision, movement, hearing and touch senses and is used to teach especially number sense and four operation skills. In TouchMath technique, reference points calling Touch Points are placed on each numbers. These points can help students to see the conceptual meaning of symbolic value.



Figure 1. The numbers with their reference points.

As seen as in the Figure 1, the students see and touch the points of numerals and each point represents the value of each numeral. Numbers from 1 to 5 have single points as their number value and a circle is put around the point in numbers 6-9. These points with circles are read twice by students while they compute an operation. These touch points express the symbolic imagery of numbers and help students with special needs number in reducing complexity and abstraction of numbers.

Touch Math technique is developed for teaching mathematical skills to individuals with special needs as well as individuals that exhibit normal development. This multisensory technique is especially helpful to students with learning difficulties and mental disabilities for developing mathematical skills (Scoot, 1993). Most useful aspect of this technique for individuals with special needs is that it allows doing addition without finger calculation or having to keep numbers in memory (Miller and Mercer, 1997).

In TouchMath teachers should manage the instruction process and should organise the instruction such as concrete form abstract according to the approach of Bruner (1996). Accordingly; in concrete phase numbers or points should be prepared as concretely and representation should be as touching the numbers and points. In representational phase, points should be put on the symbolic numbers and representation should benefit from the vision of touch points. And last in abstract phase touch points shouldn't be put and students should count by supposing touch points are there. Briefly in concrete phase represents "Touch", representational phase represents "See" and abstract phase represents "Count" without touch points. The samples of TouchMath should be used in the treatments of CRA are shown In the Table 1.

Table 1: Numeral samples in TouchMath

Concrete (Touch)	Representational (See)	Abstract (Count)

Briefly, TouchMath program is an appropriate technique for NCTM's "Number and Operations Standard" (Vinson, 2004). Advantages and benefits of TouchMath according to these standards are in the below:

1. TouchMath is a multisensory technique combining vision, movement, hearing and touch senses.
2. Having points help students in conceptual leaning of numbers and operations.
3. It founds a firm foundation in early child age.
4. It remediates learning problems in any regular grade-level classroom.
5. It is used with all types of students to teach math skills.
6. It supports remedial math instruction in high school and adult education classes.

However conceptual teaching of numbers and being useful in four arithmetical operations, TouchMath isn't included exactly to the methods in literature and lesson books in schools, yet. The aim of this research is to present the conceptual content of TouchMath and the place of it in mathematics instruction methods and also reveal the applicability of this technique accordance with specific criterions.

2. Method

In this research a qualitative approach is structured and descriptive analysis were used to analyse the criterions. The articles in 1990 and 2014 were included to this research and 32 articles were found in searching. In this research the articles using TouchMath as main method were selected and after analysing 27 articles were selected as the target articles.

The search procedure was used by Library Databases and electronical databases (EbschoHost, Proquest, National Thesis Centre (www.yok.gov.tr). In search also "TouchMath", "Touch math", "Nokta Belirleme Tekniği" and "Dokunmatik Matematik" was used as the key words.

3. Findings

The articles about TouchMath was analysed with the selected criterions. The findings were presented in each title including different criterions.

3.1 The findings according to the scientific method.

In these 27 articles three different scientific methods were used. These are experimental studies, single case studies and qualitative studies. The numbers of articles using these scientific methods are shown in the Table 2.

Table 2. The number of the articles using scientific methods

Research Methods	Number Of Articles
Experimental studies	11
Single Case Studies	12
Qualitative studies	4

According to Table 2, %44 of these articles about TouchMath are single case studies, %40 are experimental studies and %11 are qualitative studies. The articles using single case methods are shown in the following Table 3.

Table 3. The articles using single case design

Article	Number Of Participants	Type of Disabilities	Model	Dependent Variable	Results
Avant and Heller,2001	3	Mental Retardation	Multiple Probe Design Across Participants	Addition Operation Up to 20	Effective
Cihak and Foust,2008	3	Autism	Alternating treatments Model	Addition Operation	More Effective
Çalık and Kargın,2010	3	Mental Retardation	Multiple Probe Design Across Participants	Addition Operation	Effective
Eliçin, Emecen andYıkımsı,2013	4	Mental Retardation	Multiple Probe Design Across Participants	Addition Operation	Effective
Fall,2010	1	Mental Retardation	Multiple Baseline Design Across Participants	Addition and Subtraction	Effective
Fletcher, Boon and Cihak ,2010	3	Mental Retardation	Alternating treatments Model	Addition with One Digit Numbers	More Effective
Mays,2008	42	Mental Retardation	Multiple Baseline Design Across Participants	Addition with One Digit Numbers	Effective
Newman,1994	4	Down Syndrome	Multiple Probe Design Across Participants	Addition with One Digit Numbers	Effective
Pupo,1994	3	Mental Retardation	Multiple Probe Design Across Participants	Addition with Two Digit Numbers	Effective
Scott,1993	3	Mental Retardation	Multiple Probe Design Across Participants	Addition and Subtraction	Effective
Simon and Hanrahan,2004	3	Learning Disability	Multiple Probe Design Across Participants	Addition Problems	Effective
Waters and Boon,2011	3	Mental Retardation	Multiple Probe Design Across Participants	Money Skills with Including Subtraction	Effective

According to the Table 4, 2 the articles (%16, 65) are comparative studies and in two articles alternating treatments were used. The rest of the single case studies (%83, 4) are effectiveness studies. In these 10 effectiveness research different designs were used. Accordingly, 8 (%66, 7) research used multiple probe design across participants and 2 (%16, 65) research used multiple baseline design across participants. The articles using single experimental methods are shown in the following Table 4.

Table 4. The articles using experimental method

Article	Number Of Participants	Type of Disabilities	Model	Dependent Variable	Results
Bedard,2002	10	Autism	Pretest- Posttest	Addition	More Effective
Dev, Doyle and Valente,2002	11	Learning Disability	Pretest- Posttest	Numbers and Operations	Effective
Dombrovski,2010	7	Learning Disability	Pretest- Posttest	Computation Skills	No Difference
Dulgarion,2000	10	Mental Retardation	Pretest- Posttest	Addition and Subtraction	More Effective

Green,2009	12	Learning Disability	Pretest- Posttest	Test Included Four Arithmetical Operations	Effective
Jhaveri, Verna and Imam,2010	44	Learning Disability	Pretest- Posttest	Addition and Subtraction	More Effective - Less Time
Rudolph,2008	18	Learning Disability	Pretest- Posttest	Addition and Subtraction	Effective
Ulrich,2004	24	Learning Disability	Pretest- Posttest	Addition in hand	Effective -Less Time
Uzomah,2012	100	Normal Development	Pretest- Posttest	Addition	Effective
Velasco,2009	26	Normal Development	Pretest- Posttest	Addition	Effective
Williams,2005	19	Normal Development	Pretest- Posttest	Addition and Subtraction	Effective-Less Time

In Table 4 it's seen easily that pretest-posttest method was used by all of the 11 experimental studies. All of these researches used TouchMath in experimental groups and the traditional methods are used in control groups. And the articles using qualitative methods are shown in the Table 5.

Table 5: The articles using qualitative methods

Article	Number Of Participants	Type of Disabilities	Model	Dependent Variable	Results
Grattino,2004	Teachers	-	Semi-Structured Interview	The View About TouchMath	TouchMath Is Useful
Rains, Kelly and Durham, 2009	Teachers	-	Semi-Structured Interview	The View About TouchMath	TouchMath Is Useful
Vinson,2005	Teachers 505	-	Semi-Structured Interview	The View About TouchMath	TouchMath Is Useful
Wisniewski, Zeda and Smith,2002	4 Students	Mental retardation	Action Research	Addition Operations	Effective- Less Time

In Table 5 four articles are shown using qualitative research model. Three of these articles have used semi structured interview way to collect data. In these researches, researchers laid out a meeting with teachers and asked the teachers' views about TouchMath and its using in treatments. The other research's model is action research. Action research is one of the applied qualitative researches and in this research, researchers studied with students having mental retardation.

3.2. The findings about participants.

27 articles were analysed in this research and the number of students and teachers are shown in Table 6.

Table 6: The number of students and teachers who participated

Number Of Participants	Number Of Articles	Number Of Articles
Students	24	360
Teachers	3	505 and more

According to Table 6, 24 (%89) of the 27 articles studies with the students and 3 articles (%11) studied with teachers. One research of these 3 articles 505 teachers were participated the research and the other articles didn't reveal the number of participated teachers. 24 researches were investigated the effectiveness of TouchMath and because of this number of studies with students are more than qualitative studies.

In this research totally 360 students were participated in 24 articles and the other research point is the school grade of the participants. The findings about school grade of the participants are shown in Table 7.

Table 7: The number of students about their school grade

School Level	Number of Articles	Number Of Students
Pre-school	2	126
Primary School	19	186
Secondary School	2	45
High School	1	3
TOTAL	24	360

In articles 45 secondary school students and in 1 article 3 high school students were participated. In these findings it's easily seen that most of the researches (%79) were studied with primary school students.

The last point about participants is the type of deficiency of students. According to findings of the type of the students are shown in the Table 8.

Table 8: The number of students with different types of deficiency

Type Of Deficiency	Number Of Students
Mental Retardation	91
Learning Disability	107
Down Syndrome	4
Autism	13
Normal Development	145
TOTAL	360

According to Table 8, 145 students (%40) with normal development were participated to the researches. Although students with normal development are the most participated type of deficiency, these participants are just from 3 (%11) of 24 researches. In the second, the number of students with learning difficulties who participated to the researches is 107 in 6 articles (%22). In the third, the number of students with mental retardation is 91 in 12 (%44) articles. Also the number of students with autism is thirteen in 2 articles (%7, 4) and the number of students with Down syndrome is four in 1 article (%4).

3.3. The findings about dependent variable

TouchMath is usually used in number sense and four operation skills in literacy. In this research, the dependent variables are shown in the Table 9.

Table 9: The number of dependent variables

Dependent Variable	Number Of Articles
Addition	14
Addition and Subtraction	6
Computation Skills	3
Money Problems	1
TOTAL	24

As seen as in the Table 9, addition operation skills are the most commonly used as dependent variable. Addition operation skills were used in 14 (%53) articles and the number of addition and subtraction operations skills used with together is following as 6 (%23) articles. 3 (%10) articles were used computation skills and 1 (%4) article used Money problems including subtraction as dependent variable. In qualitative researches no dependent variables used.

3.4. The Findings about Reliability and Validity

In this research inter-observer reliability, generalization, maintenance and social validity data were analysed in the articles. The findings are shown in the Table 10.

Table 10: The number of articles with reliability and validity data

Analysed Data	Number Of Articles
Inter-observer Reliability	12
Generalization	8
Maintenance	10
Social Validity	5

According to Table 10, 12 (%45) articles used inter-observer reliability data in the research. 9 of 12 articles are single case studies and 3 of 12 articles are experimental studies. All of these researches gained %90-100 reliability degrees. The other articles didn't give the reliability data in the researches.

When analysed the generalization data, 8 (%30) articles used generalization data in researches. 7 of 8 articles used single case design, 1 of 8 used experimental way as model and all of them succeeded at generalization.

According to maintenance data, 10 (%37) articles used maintenance data to determine the persistence of TouchMath. All of 10 articles used single case design as model and the maintenance period are changed in a month and four month. 9 of 10 articles were succeeded in maintenance data but 1 article was being unsuccessful

in maintenance period.

Social validity data were collected to reveal the views of teachers and parents about the method used in researches. In these researches only 5 (%21) articles collected and 22 (%89) articles didn't collect social validity data. In 5 articles teachers and parents found TouchMath as useful method in Daily and school life.

3.5. The findings about the results of researches

Table 11: The number of articles about their results

Research Method	Effective	Ineffective
Experimental studies	11	-
Single case Studies	12	1
Qualitative studies	4	-
TOTAL	26	1

3 articles are used qualitative research method and in these researches data were collected from teachers. In 3 researches teachers accepted TouchMath as an effective method and they revealed using TouchMath in treatments as 99%, 84% and 54% degree. Also they explained the positive affects if it is used in teaching number sense and four operation skills while studying with students. Another common point in these researches is the representing multi-sensory teaching methods are so important in the opinion of the students' learning.

In single case researches 10 of 12 articles determined the effectiveness directly. 2 of 12 articles compared TouchMath with other methods such as using number line. In 2 comparative researches TouchMath were found as more effective than the other method and TouchMath was also found as an effective technique in all effectiveness (10) studies using single case design.

11 experimental researches and 1 action research were also aimed to determine whether TouchMath's effective or not. In 8 of 12 researches TouchMath was reported as an effective technique to teach the dependent variables and 3 of 12 researches TouchMath was reported more effective than traditional methods and in 1 research no difference was found across the other method. And also a other important result is in 4 articles TouchMath were reported as more efficient technique because of gaining time to teach the dependent variable.

4. Conclusion

In this research 27 articles about TouchMath were analysed which were done in 1990 and 2014. Accordingly, it is seen that the number of experimental studies and single case design researches are nearly same and qualitative researches are less than these two research model. An also pretest-posttest model was selected in all of the experimental researches are important for the literature. However in single case design researches, three different model were used such as multiple baseline across participants, multiple probe design across participants and alternating treatment model. According to these findings; the other models in experimental researches and comparative researches in single case design about TouchMath should be more in the future.

According to the properties of the participant who participated to the researches, one of the most important finding is participating primary school students in most of the researches (12). This finding can be explained that TouchMath is commonly used to teach primary school goals in mathematics such as number sense and four operation skills. Although using TouchMath in high school students is normal, the presence of just a few researches about TouchMath in teaching preschool (Velasco, 2009; Uzomach, 2012) and secondary school (Mays, 2008; Pupo, 1994) is important for literature about TouchMath. In the future it can be told that researches with preschool and secondary school students should be more.

Another finding in the research is the most number of participated group is students with normal development, but this is because of one researches having large number of participants with normal development students. Students with learning disabilities followed students with normal development and students with mental retardation were ranked. Although students with mental retardation were participated to 12 researches, participating less number of students were caused by designing with single case model. For all that participating all of the types of students with special needs and students with normal development is another useful findings about TouchMath.

According to findings about dependent variable, 20 researches used addition as dependent value. In these researches addition was used both single method or used with subtraction. But it's an important finding that no researches used just subtraction, multiplication and division. It is explained that these operation skills should be used in the researches about TouchMath in the near future. Furthermore, if these skills are used in the researches, the participants in preschool and secondary school students should be raise in the researches as participant.

When reliability, maintenance, generalization and social validity data analysed, it was clear that researches didn't give place exactly to these data. This is a so important finding about TouchMath and the validity of the researches. However in the recent single case designed researches variable, generalization and maintenance data were begun to use and it is thought a positive finding to notify that these data should be taken place more in the future researches. Therefore it is hard to think like the others. For the percentage of using social validity in the all

type of researches isn't enough to think positively for the future.

In the end it is clear that TouchMath is an effective technique as a multi-sensory method and it is stated exactly in different researches designing with experimental, single case designed and qualitative researches. Especially after effectiveness of TouchMath was stated in each type of researches, it was important to accept that it was a useful technique to teach number sense and four operation skills in three qualitative researches by teachers was important. Finally according the findings about the results of the researches, TouchMath should be accepted as a researched based technique to teach number sense and four operation skills.

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A study into the level of first aid of hotel employees

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Abstract

Although many studies emphasize the importance of first aid training in saving human life, it is known that individuals are known to lack the adequate first aid knowledge and skill levels. In order to decrease the death number and injuries resulted from unexpected and life threatening events such as heart attacks, traffic accidents, work accidents, natural disasters, terrorist attacks and the war, people should be equipped with their vital life-saving skills. The first professional aid soon after the emergency is important in determining the difference between life and death. The aim of this study is to reveal the education levels of the employees on first aid knowledge and skills in the improvement of customer safety in the hotel managements.

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Peer-review under responsibility of the Sakarya University.

Keywords: Health, first aid knowledge, emergency treatment, hotel managements

1. Introduction

People have participated in tourism activities for a variety of reasons throughout all the eras of the history. Dating back to very early times in history, the concept of travel and tourism has reached the peak along with the technological advancements. According to the statistics of World Tourism Organization the number of people who took part in tourism movements was above 1 billion in 2012 and the tourism receipts were above 1 billion US dollars. Besides, in 2020, it is expected that the number of people that will take part in tourism movements will be 1,8 billion (WTO, 2013). As seen in the figures, tourism sector is on the rise and has reached to massive dimensions. This being the case, the health and the safety of the tourists should be provided at every phase of the travel process, for tourists expect that their life and security will be ensured. The safety of tourists is under guarantee with specific reference to the international non-governmental organizations. For example, European union resolved for 1999-2001 period in the consumer policy action plan that risks that could threaten the health and the safety of consumers should be analyzed, safe goods and services should be offered and measures against the threats should be taken and scientific recommendations should be taken into account in setting policies on supervisions (Çicek and Özgen, 2001). Besides, in a meeting held by World Tourism Organization in 1991, it was resolved that hotels should set the standards on precaution against fire, food safety, environmental safety as well as hygiene and health needs (WTO, 1991). Among the points under discussion in the meeting, it was highlighted that basic health needs and first aid, emergency treatment, protection from accidents and appropriate health and safety environments at hotels should be evaluated within the framework of tourist health and security standards should be established accordingly (Koyunoğlu, 2003). Hotels do not only offer accommodation and food services but security services as well.

It is possible to categorize safety services as property safety, food safety and health safety. It is necessary that these services should be provided in a complete manner. Especially, it is of great importance that the health needs of the customers should be met and first aid procedures should be followed. Hotel employees with first aid skills and knowledge play an important part in saving human lives hence, it is of great significance that hotel employees should be knowledgeable about first aid procedures until the emergency service paramedics reach the place of the incident (Uçar, 2002). On the other hand, health services offered by hotels are not the final treatment services and cover only the first aid procedures. In a general sense, such first aid procedure as drowning, heart attack, electrocuting are needed within the context of hotels. In this respects, first aid services at the right and appropriate time will definitely have a positive effect on people's lives. For this reason, first aid procedures should be within the very comprehension and skills of the hotel staff. (Tataroğlu and Subaşı, 2009). Because of the significance of the subject, in order to decrease the casualty and fatality rates subsequent to an accident, first

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aid training became compulsory in work places by the “First Aid Regulation” issued by the Ministry of Health in the official gazette as of 22.05.2002 (Resmi Gazete, 2002).

2. Conceptual Framework

Among the causes of human death are accidents, natural disasters and unexpected suddenly developing causes. Cited in the ninth place of the World Health Organization’s “Health for All in the 21st Century” policy targets, the principle of “Reducing Injury from Accidents and Violence” address to the issue of first aid (Erdil 2009). First aid procedures are the un-medicated implementations through the available means and materials without medical tools in the place of the incident in order to save a life or to prevent the deterioration of the situation until the paramedics arrive at the incident scene in the case of an accident or jeopardy situation. First aider is the person who had the training of medication free implementations with the available tools, not necessarily the medical tools, for the patient or the injured within the scope of the definition of first aid (İnan and et.al., 2011). In line with the contribution of the developing technology to all aspects of human life, increases in the sudden illnesses and injuries made the need for those the first aid skills stimulated (Erdil 2009). Hence, first aid training has become an indispensable part of a modern life. Due to on-the-job or traffic accident and natural disasters a number of people lose their lives or become disabled. In such cases, since there will not be a person in charge of health issues all the time, first aid implementations that will be performed by others is of extreme importance. In such cases as heart attack, accidents or similar cases, the critical minutes of the first aid implementation is the first 5-10 minutes. Hence, it is important to start the first aid procedures within the first 5 minutes (Sosada et al., 2002). The possibility of survival or the improvement in the situation goes higher as long as the first aid is implemented timely and the emergency service reaches at the scene of incident.

A study conducted to assess the first aid knowledge level of the students and teachers in Poland found out that the majority of the teachers and students lack the desired knowledge level in first aid procedures and implementations (Sosada et al., 2002). In a similar vein, a study conducted in Kuwait University revealed that that the knowledge level of students are at moderate levels in first aid procedures (Nedaa et al., 2006). Besides, a study performed on athletics coaches at 17 High Schools in the USA found out that the first aid knowledge level is not adequate (Ransone et al., 1999). On the other hand, A study by Mahony et al., (2008) on 35 aircraft crew found out that their level of first aid knowledge was adequate; however, when it comes to ,implementation, they fail to meet up to the standards. In their study on 291 taxi drivers in Ankara, Bayraktar and Çelik (2000) noted that the first aid knowledge level of the derivers was not adequate, but they showed eagerness to have first aid training. Bayraktar et. al., (2009) found out that, following the training of the drivers on first aid, they had positive results and expressed that first aid training programs should be disseminated across all aspects of the society through the collaboration of public and private institutions. What’s more, a study done to assess the first aid knowledge level of the teachers and their attitude towards first aid training program and to determine the problems they encounter in İsparta, it was found out that the first aid knowledge level of the teachers was at moderate level, and most of them regarded themselves inadequate and they were eager to participate in the first aid training programs (Nayir et al., 2011). In sum, considering the studies mentioned above, the participants lack first aid knowledge but they show eagerness to make up for the lack in the first aid skills and knowledge.

People in tourism activities travel to other destinations different from the ones they live in. In the destinations they are in, their needs for accommodation, safety, esteem and health should also be met. In order to have sustainable tourism, services in protecting the health care of tourist and safe environment should be offered. Aydın and Şeker (2011) defines tourist health care as “the obligation to have health services for emergency and sudden developing incidents during their period of travel for holiday purposes.” as it can be understood from the definition, first aid can be evaluated within the scope of the intervention until the qualified health care personnel arrives in case of emergency. It is necessary that first aid service should be offered and measures be taken in order to protect customers from accidents and contagious illnesses in touristic establishments where the customer circulation is very high (Özsarı and Karatana, 2013). Therefore, hotel staff should have the grasp of first aid knowledge. This being the case, hotel management should offer first aid training programs, which will have a protective role in the prevention of likely risks that could emerge during operation. Besides, hotel staff should be eager in health training programs and behave in a socially responsible manner. Güler and Çobanoğlu (1994) emphasized that health education is among the implementations of preventive medicine and this should be regarded as a task not only for themselves but also for the society, which could only be implemented into real life by means of health education.

3. Purpose of the Research

The main objective of this study is to assess the level of the first aid knowledge and the skills of the staff. Besides, this study sets out to find out whether there is difference between the variables such as first aid knowledge level, age, education, and department.

4. Method of the Research

The sample group of the study is comprised of hotel employees at five-star hotels in Afyonkarahisar. The sample was calculated with $n = \sigma^2 * Z_{\alpha}^2 / H^2$ (Özdamar, 2001) formulae and calculated to be 300 employees. However, considering the fact that there could be invalid questionnaires, 400 questionnaires were administered. Excluding the erroneously coded questionnaires, 340 questionnaires were used for data analysis. The questionnaire form was administered to employees in person.

Composed of two parts, the first part of the questionnaire accommodates questions on demographic features such as age, gender, department, position, whether they have first aid certificate, their knowledge on first aid, etc... In the second part, there are 17 statements aiming to determine the first aid knowledge levels of the participants. The statements are on a –point Likert scale, ranging from (1 = Know very well” to “5= Know not at all). The second part of the questionnaire was compiled from the previous studies by Güler and Çobanoğlu, 1994; Ransone et al., 1999; Sosada et al., 2002; Mahony et al., 2008; Bayraktar et. al., 2009; Nayir et al., 2011; İnan et al., 2011.

Data obtained from the study has been analyzed through SPSS Statistical Package for Social Sciences). In data analysis, percentage, frequency distribution, arithmetic mean, standard deviation has been employed and since the data have normal distribution, independent samples t test and One Way ANOVA have been used, as well. The reliability coefficient, Cronbach’s Alpha, was calculated to be .94, which is considered high in terms of reliability of the scale (Alpar, 2011). Table 1 reports the frequency and percentage distribution of the demographic features.

5. Results

Table 1: Demographic Features (n=340)

Variables	Groups	f	%
Education	Primary School	107	31.5
	High School	155	45.6
	Associate’s Degree	43	12.6
	Undergraduate	30	8.8
	Graduate	3	0.9
	Post Graduate	1	0.3
	Other	1	0.3
Gender	Male	104	30.6
	Female	236	69.4
Age	20 and below	21	6.2
	21-25	90	26.5
	26-30	90	26.5
	30 and above	139	40.9
Experience in Tourism	0-4	152	44.7
	5-9	101	29.7
	10-14	54	15.9
	15-19	22	6.5
	20+	11	3.2
Department	Front Office	47	13.8
	Food and Beverage	109	32.1
	Security	6	1.8
	Housekeeping	88	25.9
	Human Resources	7	2.1
	Marketing and Sales	5	1.5
	Maintenance	14	4.1
	Customer Relations	4	1.2
	Accounting	15	4.4
	Spa	45	13.2
Position	General Coordinator	3	0.9
	General Manager	2	0.6
	Assistant General Manager	4	1.2
	Department Director	11	3.2
	Chief	47	13.8
	Clerk	194	57.1

	Waiter	48	14.1
	Busboy	21	6.2
	Hostess	1	0.3
	Painter	1	0.3
	Cook	8	2.4
Knowledge on First Aid and Emergency Treatment	Yes	209	61.5
	No	131	38.5
First Aid Certificate	Yes	60	17.7
	No	280	82.3
First Aid Training in the Establishment	Yes	212	62.4
	No	128	37.6
Marital Status	Single	128	37.6
	Married	212	62.4

Hypotheses tested in the study:

Gender

H₀: There is no difference in terms of first aid knowledge level by gender

H₁: There is difference in terms of first aid knowledge level by gender

Education

H₀: There is no difference in terms of first aid knowledge level by education

H₁: There is difference in terms of first aid knowledge level by gender

Department

H₀: There is no difference in terms of first aid knowledge level by department

H₁: There is difference in terms of first aid knowledge level by department

First Aid Training

H₀: There is no difference in terms of first aid knowledge level by first aid training

H₁: There is difference in terms of first aid knowledge level by first aid training

First Aid Certificate

H₀: There is no difference in terms of first aid knowledge level by first aid certificate

H₁: There is difference in terms of first aid knowledge level by first aid certificate

The results of the analyses suggest that there is statistically significant difference between first aid knowledge level and gender at 95 % reliability level. According to the values in Table 2, it is seen that females have more knowledge on first aid than males. As for the education status, H₀ hypothesis is accepted and it is seen that there is no statistically significant difference by primary school, high school, associate's degree, university and graduate degree at 5% reliability level. When it comes to the department, H₀ hypothesis is accepted and it is seen that there is no statistically significant difference by departments at 5% reliability level

It is found out that there is statistically significant difference between first aid knowledge level and whether they received first aid training before ($p = 0.001 < 0.05$) at 95% reliability level. Considering the mean scores in Table 2, it is seen that those who received first aid training have more knowledge than those who didn't. It is also seen that there is a statistically significant difference between those who have first aid certificate and those who don't ($p = 0.00 < 0.05$). It could be said that first aid knowledge level is higher for those who have the first aid certificate by looking at the mean values in Table 2.

Table 2: Comparison of the First Aid Knowledge Level of the Employees by Groups

Variables	Groups	First Aid Knowledge Level	
		Mean	Std. Dev.
Gender	Male	2.65	0.76
	Female	2.99	0.80
	p (sig.)	0.000	
Education	Primary School	2.89	0.75
	High School	2.75	0.82
	Associate's Degree	2.62	0.76
	Undergraduate	2.50	0.70
	Graduate	2.84	0.70
	Post Graduate	1.58	----
	p (sig.)	0.091	
Department	General Coordinator	2.59	0.77

	General Manager	2.63	0.72
	Assistant General Manager	2.65	0.79
	Department Director	2.82	0.88
	Chief	2.93	0.74
	Clerk	3.00	0.72
	Waiter	2.98	0.68
	Busboy	2.73	0.56
	Hostess	3.06	0.73
	Painter	2.81	0.82
	p (sig.)	0.421	
First Aid Training in the Establishment	Yes	2.65	0.73
	No	2.94	0.84
	p (sig.)	0.001	
First Aid Certificate	Yes	2.36	0.75
	No	2.83	0.77
	p (sig.)	0.000	

$p < 0,05$

6. Conclusion and Suggestions

Hotel establishments are of specific characteristics in terms of the operations. Apart from accommodation services, they also offer food and drink, entertainment and security services, it is important that the expectations of the guests should be met and services that will meet the needs for health care and emergency services should be offered. For this reason, till the qualified medical personnel arrives at the place of incident, staff with the first aid knowledge and skill should be available in this study, it is seen that females have higher level of first aid knowledge than males, which could be put down to the fact that they act with maternity feelings and have higher level of protection feelings. Besides, there is no statistically significant difference between the education status and the first aid knowledge level of the employees. This shows that first aid is an issue that should be known by everyone and hotel employees have this awareness. On the other hand, it is seen that there is no statistically significant difference between the department and the first aid knowledge level. The fact that there is no statistically significant difference by department and education status shows us that first aid issue is an issue of humanity. That is to say, it could be put forward that hotel employees should have the first aid knowledge. Employees who have received first aid training will be more knowledgeable than those who have not. This was also confirmed by the findings of the study. Therefore, hotel establishments should not only equip the employees with vocational skills but with skills related to the social life. Since those with first aid certificate will have the first aid implementations in a conscious manner, they will have a contribution to human life. Intervention in first aid procedure in incorrect manners risks human life. On the other hand, employees equipped with first aid skills will add value to hotel, whereas the opposite case will have a negative impact on the hotel image. In order to prevent this, the number of studies on first aid which represent the all aspects of society should be increased; and as a result of the studies conducted in the field, people should be directed to first aid training program.

Tourism sector is composed of a variety sector branches. This study is limited to employees at only five-star hotels. It would be great benefit to conduct studies on other branches of tourism sector; travel agencies, food and beverage establishments, entertainment establishments, etc... in this way, the present status of first aid knowledge levels of employees could be fund out. According to the result that could yield measure that could be taken by the private sectors and public sectors could be determined.

Acknowledgements

We would like to express our gratitude to Project Department of Anadolu University and the staff for their support and contribution (Project No:1306E222).

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A study of certain biology and biotechnology concepts in secondary school and high school course books in terms of scientific competency

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Abstract

It is very essential that the teachers of science and biology transfer the biology and biotechnology concepts properly by using good programs and teaching strategies as well as the development of biology and biotechnology education programs and models for science teachers and students. In recent years despite the increase of the technological equipments; course books are still the most important source, used in all levels of education, enlightening what the students will learn during the education period, what the teachers will teach and what method will be used during this period. Within this context, scientific quality, language, visuals, diagrams and models, context, technical and physical qualities, used in course books, have necessary roles for the students to learn the concepts properly and relate them to each other. The aim of this research is to study the distribution and relation of the subjects and the concepts of cell, chromosome, DNA, gene, GMO in Secondary School Science and Technology course books and High School Biology course books together with the scientific competency and accuracy level while defining these concepts. In this study, document method from qualitative analysis methods has been used. According to the results of the analysis, it has been identified that there are inadequacies of teaching the mentioned concepts present in the studied course books and relating them in terms of scientific competency and accuracy.

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Peer-review under responsibility of the Sakarya University.

Keywords: Biotechnology, Course Book, Certain Biology Concepts, Certain Biotechnology Concepts.

Introduction

Modern biotechnology covering numerous areas such as medicine, pharmacy, food industry, agriculture and biology is of increasing interest in Turkey as well as elsewhere in the world. New biotechnological advancements are followed and carried out in new research at universities and institutes in Turkey notwithstanding that the basic problem is encountered amongst the technical staff. Historically, biological sciences showed the most important developments after 1940's, such as the discovery of the lifesaving antibiotics and green revolution by using pesticide and putting chemical compounds into soil (Doelle, 2001). Especially many unknowns in molecular biology area began to be known with the finding of molecular shape of DNA by Watson and Crick. These developments in molecular biology and DNA rapidly gave a way to many inventions, discoveries and applications, one of which later was called biotechnology (Türkmen & Darçın, 2007). Biotechnology is a great area for students to understand the heredity, agriculture and critically evaluate the benefits and risks of this new technology. Promoting scientific literacy among all learners is a central goal of science education. Person who is scientifically literate on biotechnology can compare the processes of selective breeding and transgenic manipulation of plants, discuss the arguments for and against genetic modification of foods, describe the possible future impact of genetically modified foods, analyse public opinion about the use and safety of genetically modified foods (Dawson & Schibeci, 2003).

Teachers are important role to help their students become a scientifically literate. Teachers' knowledge on certain biology and biotechnology concepts especially GM foods and GM medicines risks and benefits of these technologies associated with their use is important. Teachers should know how to teach biotechnology effectively in order to help students understand the subject and create an effective learning environment. A teacher cannot be expected to teach what he/she does not understand. Therefore, educational programs should focus on improving science teachers' conceptions of the new technological development like as biotechnology with the anticipation that their own students' knowledge on the issue would improve (Hurd, 1998). The lesson plans on certain biology and biotechnology concepts should focus on students' understanding on ethical issues especially the concepts of cell, chromosome, DNA, gene, GMO, identification of GM foods in their diet,

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comparison of traditional methods of plant breeding and modern techniques of genetic engineering, identification of advantages and disadvantages to GM foods, and importance of responsible use of technology.

The development of biotechnology education programs and models for science teachers and students is of importance since the concepts of biotechnology are of significance to all science and biology teachers using good curriculums and instructional strategies (Dunham, Wells & White, 2002). It is important to know how people and students perceive and understand biotechnology and what are the misconceptions related to biotechnology. In this point, biotechnology education gains importance because the wrong information about biotechnology and negative attitudes toward biotechnology could only be changed through science and science education (Harms, 2002).

The aim of the studies on the biology education to reveal the causes of failures. The most important of reasons, most students' understanding of the concepts wrong in biology. In this situation, students' understanding of both the available information and makes it difficult to advance their knowledge further. In recent years, advances in genetics, draws attention to the importance of this science. In some countries, new methods and techniques have focused on putting out to provide better learning studies students of such as gene, DNA and chromosome concepts. However, few studies of this type in our country. Therefore, such as gene, DNA and chromosome concepts what students know and do not know, or how wrong they knew better than to learn these concepts should be investigated. Bahar, Johnstone & Hansell (1999) and Lewis & Wood-Robinson (2000) on the high school and college students and Tekkaya et al. (2000)'s high school graduates in their work, on the problematic issues related to cell division and genetics, and biology curriculum is inadequate understanding of the issues underlying this case has created difficulty for learning other subjects have suggested that. In this context, course books are the most important resource in the teaching and learning process. Because how the information presented in the course books, the language used in this presentation, pictures, diagrams and models, content, technical and physical characteristics have important roles in the development of students' thoughts. Quality of education takes place with high quality course books (Küçükahmet, 2001; Kikas, 2004; Kılıç, 2005; Atmaca, 2006; Laçın-Şimşek & Tezcan, 2008; Kırbaşlar & İnce, 2010; Karadaş, Yaşar & Kırbaşlar, 2012).

Purpose of the Study

The aim of this research is to study the distribution and relation of the subjects and the concepts of cell, chromosome, DNA, gene, GMO in Secondary School Science and Technology course books and High School Biology course books together with the scientific competency and accuracy level while defining these concepts.

Methods of the Study

This study was conducted according to the method of the document. Existing records and documents by examining the data collection "documentary screening" (Madge, 1965), "documentary observation" (Duverger, 1963), Rummel (1968) and many more researchers "document method" to describe as. Best (1959) this method if the existing records or documents, as the data source, refers to the systematic examination (Karasar, 2008).

This study consists of two parts: In the first part, one of 4th and 5th grade, two of 6th, one of 7th and two of 8th "Science and Technology" course books and one of 9th, 10th, 11th and two of 12th "Biology" course books were coded in 2011-2012 terms and accepted as essential "Science and Technology" and "Biology" course book by Ministry of National Education. In the second part of the examination of course books is situated.

Examination of course books followed the steps:

1. Biology curricula specified in the course books and "cell, chromosome, DNA, genes, genetic issues and concepts" in this curriculum have been identified.
2. The identified issues examined in terms of concept carefully, the accuracy of concepts, relationships and handled by the format of the class curriculum was evaluated.
3. Missing or incorrectly concepts defined, suggestions were made to rectify this.
4. Literature search was carried out for the detected deficiencies and mistakes can cause a false learning or misconception and the findings of various researchers are included.

3.1. Samples

The sample of this study is formed by, in the academic year 2011-2012, one of 4th (Agalday, Akçam, İpek & Kablan, 2011), one of 5th (Bağcı et al., 2011), two of 6th (6A: Comission, 2011a; 6B: Korkmaz, Tatar, Kıray &

Kibar, 2011), one of 7th (Tunç et al., 2011a) and two of 8th (8A: Tunç et al., 2011b; 8B: Gündoğdu, 2011) classes taught in “Science and Technology” course books and one of 9th (Ercan-Akkaya, Albayrak, Öztürk & Cavak, 2011a), one of 10th (Ercan-Akkaya et al., 2011b), one of 11th (Sağdıç, Bulut, & Korkmaz, 2011) and two of 12th (12A: Comission, 2011b, 12B: Kıvanç & Yel, 2011) classes taught in “Biology” course books.

3.2. Analyzing Data

Analysis of the research was designed for distributions and relationships in class curriculum between the genetic concepts and subjects such as cell, chromosome, DNA, gene, GMO in “Science and Technology” and “Biology” course books.

Findings

In accordance with the analysis made in the books of Science and Technology and Biology of the biggest scientific deficiencies in DNA and gene expression was found to be. The inadequacy of the definitions and that of the sampling images are pointed out in explaining the position and the function of the gene and DNA (Table 1).

Table 1. Gene Definitions in Science and Technology and Biology Course Books.

Class-Book	Page	Unit	Definition
8A-Science and Technology	37	Cell Division and Inheritance	DNA is the cell's authoritative molecule, and directs vitality actions such as, nutrition, respiration and reproduction. There are gene zones in DNA's structure that affects our genetic heritage specialities. Genetic heritage is carried on by genes.
8A- Science and Technology	40	Cell Division and Inheritance	Chromosomes carry DNAs, DNAs carry genetic heritage genes. Genes are made up of nucleotides.
8B- Science and Technology	17	Cell Division and Inheritance	Gene is located in chromosome structure and part of DNA which allows the transfer a specific feature for future generations.
8B- Science and Technology	37	Cell Division and Inheritance	DNA is composed of genes. Genes are composed of molecules called nucleotides.
9-Biology	102	Cell, Organism and Metabolism	Gene is a part of DNA, made up of nucleotides and responsible for at least one protein's or RNA's synthesis.
10- Biology	136	Cell Division and Reproduction	These DNA particles that are made up of approximately 1000-1500 base ranges make up our genomes.
11- Biology	114	Inheritance, Genetic Engineering and Biotechnology	Gene is called part of chromosome which allows the transfer of a inherited character to offspring. Gene, which is part of the DNA of about 1500 nucleotides.
12B- Biology	62	Inheritance	Genes are units which coding for protein synthesis and has information about the formation of inherited characters. Sequence and number of nucleotides in the gene that make each character different from the others.
12B- Biology	83	Inheritance	Gene is called the smallest parts of DNA strand that provides the formation of a character in organisms.
12B- Biology	129	Inheritance	Gene, a small part of the genome, is a unit of heredity passed from cell to cell and from insemination to fertilization. Gene in other words, the basic unit of heredity and a part of a DNA specific length with a knowledge of a protein molecule capable.

Results

According to the conclusion which is made by studying cell and genetic subjects in primary school Science and Technology course books and secondary school Biology course books: Cell structure is introduced to the students, for the first time in 6th grade Science and Technology course book. In this subject, cell is introduced, for the first time male and female reproduction cells and fertilization are explained, and the authorizing function of the core in the cell is mentioned as well as the fact that the core is the means by which genetic heritage is carried. About DNA and genes there is no information. Neither in 7th grade Science and Technology books. In 8A book, chromosomes-DNA-gene notions are defined and shown in images. But it cannot be understood

clearly, with this definition and images, where genes are placed in chromosome and DNA exactly. In 8A book, “Let’s research and prepare” activity, genetic engineering and biotechnology notions and GMO notion, is explained in this activity; However whether students will learn these notions or not depends on the fact whether the teacher does this activity in the class or not. According to Tarhan, Cavas & Asan (2002), 8th grade Science and Technology course book has a structure that prevents the students do the activity with the necessary consciousness due to the fact that activities have priority over basic knowledge, and due to the lack of adequate questions which will direct students to the target knowledge. Temelli (2006) has pointed out most students in secondary school have difficulties in understanding notions and subjects about genetics, and notion fallacies. One of the main reasons of these notion fallacies is the fact that most classes are teacher oriented. “Genetically Modified Organism” notion is mentioned, in all primary school Science and Technology course books and Secondary School Biology syllabus, only once in an activity in 8th grade Science and Technology in 8A book. It does not take place in the subject itself. If the teacher does not do the activity in the class, it seems the notion will remain there.

“GM products are generated to meet the needs of the growing human population and having more efficient sustenance” definition is placed in 8B course book. Producing oversized tomatoes, cucumbers, hundreds of wheat from only one seed, criticized with their possible damages to human health and these products under discussion position. The square watermelon image below the “DNA and the Genetic Code” section is shown an example for genetically modified product, and this leads to a misconception. As seen in the Table 1, it is understood from gene definitions that, genes are inside DNAs in chromosomes, and they are the means by which genetic heritage is carried on and are made up of nucleotides. However, it is not understood clearly where gene is placed in DNA. A clear location is not singled out in the images either. In a research of Tarhan, Cavas & Asan (2002), in evaluation of genetics units in 8th grade Science and Technology subjects, it is concluded that, the structure of DNA nucleotide chain cannot be understood, the definition of nucleotide unit is not clear, and it is very hard to understand this notion. Also, in the research by Tarhan, Cavas & Asan (2002), genetic unit is evaluated in various books confirmed by Ministry of National Education. In all the books that were evaluated, the images do not support the knowledge given in the subjects, and are inadequate. It has been concluded that in these books nucleotide unit which is crucial in understanding DNA nucleotide chain structure is not clear and hard to understand. According to Özdemir (2005), it has to be emphasized that DNA’s specificity stems not from its chemical components but from the fact that the sequence of four kinds of organic bases are different. In a research of Temelli (2006), he questioned smallness and magnitude relationship, only 63% of the sampling gave the right answer to this question. In the same research, to the question about the “structure of genes” only 41.3% of the sampling gave the answer that gene is a part of DNA. In the research of Şahin and Parim (2002), it is concluded that, the relation between gene and chromosome cannot be understood clearly, as 25% of the participants stated genes are bigger than chromosomes. In the same way, in researches Lewis, Leach & Wood-Robinson (2000), Tatar & Cansüngü Koray (2005), Öztaş & Öztaş (1997), most of the participants stated chromosomes are bigger than the core. According to Tatar and Cansüngü Koray (2005), the cause of the inability to make chromosome-DNA-gene sequence right might be the fact that these notions are not understood clearly. In a research made by Saka & Akdeniz (2004), pre-service science teachers have notion fallacies in various subjects of genetics. Among these fallacies, there are fallacies about chromosome-gene DNA notions, such as; DNA is a part of chromosome; chromosome is a part of DNA, chromosome and DNA are the same thing; DNA; chromosome and gene are parts different from each other.

In 8A Science and Technology course book, there is an image of a tobacco plant to which a firefly’s genes are transmitted by using biotechnical techniques. In this image, it is emphasized that the tobacco plant is sparkling; this image might make the student think that the image is a visual for all GM products. In 9th and 10th grade Biology books, “cell” is described in detailed manner, and even though chromosome-DNA-gene relationship is explained as a genetic heritage component in the core, it is still not explained where the genes are exactly placed inside chromosome in DNA. There is a genetic topic in 11th grade Biology course book and the concept of GM organism is included in a large extent. Describing the “GM organisms or transgenic organism is an organisms whose genes are modified by genetic engineers” is the first real information about GM organisms is handled 11th grade Biology course book. The importance of biotechnology, genetic engineering and effects of genetically modified organisms on human health are emphasized in continuation of the subject. There is not cell and genetic topic in 12A course book, 12B course book is generally addressing cell, gene, and genetic subjects. In this case, students of high schools who choose the course book 12A will graduate without learning genetic issues. As seen in Table 1; at 8th, 9th, 10th, 12th grades gene definitions are made many times. These definitions, as pointed out before, do not help the exact position of the genes to be defined, and there are no images to support this.

In 12B Biology course book, the subjects are genetic engineering and biotechnology subjects. The applications in industry, cultivation and applications on humans and animals are told in detail. Among all these subjects, GM organism notion is not mentioned. GM products are very controversial subject, and only

information about GM organisms is in 11th grade course books, it is obviously in inescapable for student who graduate without learning this issue from high schools will learn GM organisms mostly from media if the teachers do not teach this subject in 12th grade. Since such a controversial and up to date subject is not included in course books, if the teacher does not teach the subject in the class either, it will be inevitable that the students learn about this notion from media, and graduate without learning this subject. What they learn from the media is controversial news depending on personal or institutional ideas with no validity.

As a result, when examined in the definition of the concepts mentioned in the course books, to relate concepts in teaching and scientific shortcomings in the adequacy and accuracy were determined. These deficiencies can lead to learning these concepts and advanced the wrong information becomes available as the basis misconceptions seem to be a high lifetime risk. In this context, the fact that the course books which are the basic for teaching science do not cover the notions sufficiently causes the students to learn these notions in the wrong way, or in an inadequate way. It has been concluded by various researchers, that the notions that have not been comprehended totally, but have been learnt roughly and wrongly may cause notion fallacies and course book based notion fallacies are encountered very often.

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A study of compliment responses in English: a case of North Cyprus

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Abstract

Individuals often apply the sociolinguistic norms of their primary language to the patterns of response in a second language. The purpose of this study is to assess the compliment responses of native and non-native Turkish ELT students in North Cyprus. The data is collected through the use of written discourse completion tasks (DCT), with a set of six different scenarios in which the students are asked to respond to specific compliments. Six native and six non-native Turkish ELT students participated in the study. The resultsshowedthat, therewassignificantdifference in English complimentstrategiesbetweennative and non-native Turkish ELT students.

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Peer-review under responsibility of the Sakarya University.

Keywords: sociolinguistic; pragmatic transfer; English language; compliment response

Introduction

Individuals often apply the sociolinguistic norms of their primary language to the patterns of response in a second language. This phenomenon is commonly referred to as pragmatic transfer and can be positive when L1-L2 normative speech patterns match, or negative when they clash. The problem is intercultural communications can be seriously hindered among native and non native speakers as a results of pragmatic transfer (Rizk,2003).

It is claimed that any understanding of sociolinguistic elements, including the contextualization of compliment responses, requires a view of the link between ethnography and the development of linguistic skills. Because communications occur within social contexts and are defined by societal forces, assessing the context in which responses occur is imperative to identifying the processes influencing communications (Ball, 2005; Centeno et al, 2007).

Huth (2007) stated that sociolinguistics define a significant view of compliment use as a function of social interactions that are rather culturally-shaped than merely universal. Compliments are used as part of interpersonal communications in some cultures, including the American culture, as a means of expressing acceptance and as a method for starting communications (e.g. "You look nice today."). While the most common culturally defined response to a compliment in the United States is to simply acknowledge it, by stating "Thank you," people of other cultures may not respond in the same manner to a compliment (Bamlund and Araki, 1985). In some cultures, denying the compliment is one way in which members of the culture acknowledge the compliment. In others, a lack of response is appropriate, especially if the compliment is made by a man and directed at a woman (Cedar, 2006).

Koven (2004) asserts that it is the sociolinguistic factors impacting intercultural communications that shape the correlation between language ideologies and functionality. This corresponds with the need to assess pragmatics as they influence the function of language.

Al Falasi (2007) argued that the effective and appropriate communication between people with different primarily languages requires the utilization of both linguistic and pragmatic competence. Researchers maintain that in EFL classes, educators often focus on linguistic knowledge, rather than pragmatic knowledge, which can result in pragmatic failure in the practical application of language (Al Falasi, 2007). Pragmatic transfer is of the mechanism through which pragmatic failure occurs, and refers to the transfer of primary language knowledge into secondary language usage. El Samaty (2005) mentions one factor that might influence pragmatic transfer and that is learners' perception of "what constitutes a language specific or a universal issue"

One of the underlying reasons for differences in primary and secondary language references related to compliments and responses is that the purpose and function of compliments vary significantly and the communication of compliments required an understanding of the context in which it occurs (Wolfson, 1989; Cedar, 2006). Rather than this form of language being informational or referential, compliments and responses are affective and social, and the specificity of the compliment and response is linked to cultural perspectives (Cedar, 2006). Though language instruction often focuses on linguistic features, the pragmatics of language relates directly to functionality in compliments and compliment responses. Cedar (2006) recognized that the understanding of studies of how native and non-native speakers address the issue of compliments in English provides a basis for English language pedagogy, which is supported by models for cross-cultural communication.

Manes and Wolfson (1981) suggested that one other consideration in the development of a study of factors influencing the pragmatics of compliment response is the nature of the interaction in which the compliment occurs. In concert, Gumperz (1982) also maintained that the social acceptability of the use of correct language is also linked to the ability to identify the purpose of the language. The purpose of the compliment, the goal of the language use, is an important consideration in defining the response. Learners of a second language must understand how to be both linguistically competent, then, and also communicatively competent, demonstrating a understanding of "linguistic and related communicative conventions that speakers must have to create and sustain conversational cooperation" (Gumperz 1982, p. 209). This underscores the complexity of providing instruction for second language learners in compliment/response scenarios and demonstrating an understanding of language conventions.

This study which takes place in North Cyprus assesses the compliment responses of native Turkish ELT students and non-native Turkish ELT students, in order to determine to what extent responses to compliment patterns are linked to L1 or L2 pragmatic knowledge. In this non-native English context researchers have

recognized that the sequence and pattern of compliment responses is often standardized within a given culture. Understanding the standardization of compliment responses and the use of pragmatic first language knowledge through a comparative view of respondents with differing primary languages can be beneficial to contextualizing the problem of pragmatic transfer.

A number of the studies utilized by Al Falasi could be integrated into a study of native Turkish ELT speakers and non-Native Turkish ELT speakers as a means of identifying the application of normative speech patterns of the primary language to compliment responses in English (See Herbert, 1986; Wolfson, 1986; and Rizk, 2003).

2. Methodology

The research tools for this study include the use of discourse completion tasks, a set of six different scenarios in which the students are asked to respond to specific compliments. In this assessment, the scenarios were devised to demonstrate variations in responses that could occur in the presence of complimentary discourse.

Subsequent to this task and assessment process, interviews will also be conducted that provide for variations in responses and also help to show why the students selected the responses they did. This can give insight into the data that is collected and the purpose or function of the response (e.g. was it related to pragmatic transfer) (Ishihara, 2003).

The research participants for this study are 6 native Turkish ELT students and 6 non-native Turkish ELT students. The students will be asked to participate in discourse completion tasks (DCTs) and subsequent interviews and comparisons will be made of the outcomes of their tasks. This research methodology is based on studies by Al Falasi (2007) who conducted similar studies of Arabic learners of English through the use of discourse completion tasks. The comparison of English language responses for non-native and native Turkish ELT learners is the basis for this study.

3. Findings

The students will be provided with six different scenarios. The following is an example from the six scenarios that can be utilized:

Scenario #1: You made a dish that you brought to a dinner for students in your class. One student comes up to you and says: "That dish was very good." How do you respond?

Student responses are collected and assessed in comparison to traditional responses noted as standard, "formulaic" English response (e.g. "Thank you"). Assessments of the native and non-native Turkish students are analyzed for each of six response scenarios.

In order to examine the similarities and difference between native and non-native ELT speakers of English the data collected from two groups through the discourse completion task will be presently analyzed for the six scenarios. The analysis will be based on Herbert's Taxonomy of compliment responses (Table 1).

Table 1. Herbert's Taxonomy of Compliment responses (Herbert 1986, p.79)

Response Type	Example
A. Agreement	
I. Acceptances	
1. Appreciation Token	Thanks; thank you; [smile]
2. Comment Acceptance	Thanks, it's my favorite too.
3. Praise Upgrade	Really brings out the blue in my eyes, doesn't it?
B. Nonagreement	
I. Scale Down	It's really quite old.
II. Question	Do you really think so?
III. Nonacceptances	
1. Disagreement	I hate it.
2. Qualification	It's all right, but Len's is nicer.
IV. No Acknowledgement	[silence]
C. Other Interpretations	
I. Request	You wanna borrow this one too?

Scenario 1:

You have just finished presenting your research paper. At the end of the class (When you were just leaving the classroom) , one of your classmates say: You did an excellent job! I really enjoyed your presentation'' You

answer: _____.

Number of NSs	Responses	Agreement
5	'Thank you'	Appreciation Token
1	'Thank you I enjoyed yours too'	Comment Acceptance
Number of NNSs	Responses	Agreement
5	'Thank you. I worked very hard and tried my best' or 'Thank you I put a lot of time and effort into it'	Praise Upgrade
1	'Thank you'	Appreciation Token

Scenario 2:

You have some friends and relatives over for coffee and cake that you baked. Someone says: 'Tastes Yummy!'

You answer: _____.

Number of NSs	Responses	Agreement
4	'Thank you'	Appreciation Token
1	'I think so too'	Praise Upgrade
1	'Thank you would you like some more'	Comment Acceptance
Number of NNSs	Responses	Agreement
6	'I like to bake it's a hobby of mine' or 'I bake this cake all the time, it's my favourite' or 'Thank you it's me baked it'	Comment Acceptance

Scenario 3:

You were shopping for a skirt and a stranger (male) approaches you and says : ' This would look amazing on you ' You answer: _____.

Number of NSs	Responses	Agreement
4	'Thanks'	Appreciation Token
2	'Thanks. I'll try it on'	Comment Acceptance
Number of NNSs	Responses	Agreement
6	No Acknowledge	Non-Agreement (silence)

Scenario 4:

You were shopping for a skirt and a stranger (female) approaches you and says : 'This would look amazing on you!' You answer: _____.

Number of NSs	Responses	Agreement
3	'Thank you'	Appreciation Token

2	'Thank you I think so too'	Comment Acceptance
1	'Thanks'	Praise Upgrade
Number of NNSs	Responses	Agreement
3	'Thank you'	Appreciation Token
2	'Thank you I'll buy it then'	Comment Acceptance
1	'Really brings out the blue in my eyes, doesn't it'	Praise Upgrade

Scenario 5:

Some friends are over at your house. One of them looks at a clock hanging on the wall and says: 'I love your clock. It looks great in your living room!' You answer: __

_____.

Number of NNSs	Responses	Agreement
3	'Thanks'	Appreciation Token
3	'Thank you I think so too'	Comment Acceptance
Number of NNSs	Responses	Agreement
6	'I think so too. I try to get things that go well with the room.', 'Thank you .I got it from Ikea.', 'I bought it when I was in Paris. It's a very expensive antique.!', and ' Thanks. I bought it from London.'	Comment Acceptance

Scenario 6:

You're wearing a new shirt and a colleague looks at you and says: ' This shirt looks great on you! Blue is a great colour for you'. You answer: _____.

Number of NNSs	Responses	Agreement
6	'Thanks. I like the colour blue.', 'Thanks, that's what they said about this colour', and 'Blue is my favourite colour.'	Comment Acceptance
Number of NNSs	Responses	Agreement
6	Thank you .I wasn't sure at first but I like it now.', 'Thank you it's my favourite colour.', 'That is my colour I always wear blue.' and 'Thank you I love blue too much.'	Comment Acceptance

4. Conclusion

This study is based the investigation of pragmatic transfer of compliment responses in Turkish learners of English compared with the data from native speakers of English. The findings of the study show that NNSs of

English did not produce target-like compliment responses. Their cultural knowledge affected their responses. They literally translated Turkish formulaic expressions used in compliment responses and these expressions were not always suitable for the compliment given in English. First and second scenarios show that how non-native speakers tend to not accept compliments without justification, whereas as native speakers can. The NNSs responses to scenario three are gender related confirming prior studies such as Cedar (2006). The NSs pattern does not put any social-distance and still does not change but NNSs pattern changes to silence. Based on the interviews very clear that, there are distinct differences on responding the compliments between two cultures. NSs stated that in their culture, the compliments as a way of being polite and accept compliments with pleasure. Whereas, in Turkish culture people don't accept a compliment if it comes from a stranger, especially from a man. This cultural difference puts a barrier for their language learning. The answers to scenario four also shows that the culture affect the responses. Half of the NNSs were offended by the compliment given from a male but they accepted the compliment when it was from a female. On the other hand native speakers of English were comfortable when they received a compliment either from a male or a female. Also in Scenario 5 and 6, the pragmatic transfer can be seen clearly. Both NNSs and NSs responses to this scenario were agreement. However all NSs responded by giving short answers, but NNSs answered this scenario by giving explanations which in their culture this is the way to respond to this kind of compliment. These findings show that NNSs are affected by their own culture in responding to compliments. This study exposed that it is not enough to build learners' linguistic competence and it will be beneficial to develop their sociocultural, which will in turn develop their understanding of the frames of interaction and rules of politeness within the target culture.

As a result, to prevent the misunderstanding of the responses to the compliments between native speakers of English and Turkish learners of English;

First; it is important to be aware of the pragmatic transfer so, when designing textbooks and syllabus, cultural differences should be taken into consideration.

Second; the usage of authentic materials from the target language will be helpful

Third; focusing on learner centered activities, like role-play and real discussion will be beneficial for Turkish learners of English,

And finally, if it is possible invite native speakers of English into the classroom and let non-native ELT students have conversation with them or take non-native ELT students to the places which they can practice their English with native speakers of English.

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A study of view on child rearing in Korean myths : focusing on Shamanism

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Abstract

This paper analyzes the view on Child Rearing in Korean Myths. It aims to convey value of Korean traditional ways of child rearing. In South Korea, child rearing is regarded as one of the most important social matters. Due to the low birth rate, Korea tries to take social responsibility for child rearing. Even though there have been overflowing information about how to raise children, parents have anxiety about parenting. South Korea have many traditional ways of child rearing. Korean traditional child rearing methods can provide solutions for reducing parents' anxiety. However many parents have doubt about how effective these were. It is because they consider such methods unscientific and less professional. So many researchers insist that these parents need to realize values about Korean traditional child rearing. Among Korean myths, shamanistic myths that reflect common people's life patterns and lives show Korean people's life values, culture and everlasting wisdom. To begin with, the study selected a total of 12 shamanic myths and analyzed contents about setting, characters, and events. The results of the study were summarized in four meanings : First, Affective Rearing ; Display of Boundless love. Second, Independent of Rearing ; Letting Children GO. Third, Rearing of Destiny ; Becoming a Parenthood. Fourth, Relation Oriented Rearing. It can be guidelines to plan parent education and child-care support system, based on Korean cultural identity.

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Peer-review under responsibility of the Sakarya University.

Keywords: Korean Myths, Traditional Child Rearing, View on Child Rearing

Introduction

Child rearing had long been regarded as the unique role of family, and society is now considered to be also responsible for that along with the rapid shifts of environments. All sorts of mass media deal with a wide variety of child rearing matters everyday such as a low birth rate, how to raise children, or parental roles. Despite such a flood of information, however, parents who raise children feel much anxiety about child rearing(Kim & Cho, 2012).

Modern parents disregard traditional ways of child rearing due to various new methods from the West, viewing the traditional ones as unscientific or unprofessional(An, 2013). But a recent television documentary "Old Future, the Secrets of Traditional Child Rearing" suggests that the traditional Korean ways of child rearing are scientific enough and reveal the wisdom of our ancestors(EBS Docuprime, 2012). It's a desirable phenomenon to shed new light on traditional ways of child rearing in modern times, but there are neither sufficient research efforts nor full awareness about the traditional methods(Park, 2012). What matters above all is that parents who raise children should be helped to arouse their own parental instincts instead of merely being informed about how to be delivered of a baby in an easier way, when to suckle a baby, how to make weaning food or how to deal with insistent children(Kim & Cho, 2012). This study focused on Korean myths that represented a unique Korean view of child rearing the best. In his book, Eliade regarded myths as 'a holy history' and told that the world in myths is a world of holiness and relieves present pain and makes it significant. In addition, he mentioned that it would be advisable to find human nature in myths(Eliade, 2003). Myths include time-honored wisdom and the collective unconscious of human mind(Ro & Hwang, 2004).

Among Korean myths, shamanism myths that reflect common people's life patterns and lives show Korean people's life values, culture and everlasting wisdom.

When earlier studies were analyzed to explore the value of myths, it seems necessary to pay attention to unique Korean values about child rearing to accept traditional ways of child rearing and apply these methods in a manner to suit modern times. If shamanism myths are considered to be cultural media that represent the life of traditional society, it could definitely be said that traditional view of child rearing is best reflected in the myths. In fact, however, lots of studies have examined the educational significance of myths, the meaning of gods and femininity of myths, but no studies have ever tried to analyze the meaning of child rearing in myths.

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The purpose of this study was, therefore, to examine parental view of child rearing in shamanism myths in an effort to shed light on the meaning of child rearing in Korean culture. The findings of the study are expected to step up the improvement of the understanding of Korean people's unique values related to traditional ways of child rearing and to suggest how to raise children in a manner to be appropriate for Korean cultural identity.

A research question was posed :

What is parental view on child rearing in Korean myths?

Research Method

.1. The Selection of Data to be Analyzed

A list of orally transmitted myths that had been passed down from generation to generation across our country was made in consideration of the characteristics of the oral transmission of shamanism myths and based on the raw data list of orally transmitted myths released by Korea Creative Content Agency.

As shamanism myths have mostly been orally transmitted, the texts of the myths are included in various kinds of literature by Korean myth researchers. But the amount of the myths is quite tremendous, and there are numerous numbers of myths that have similar narrative structures or the same main characters yet are different in titles.

In this study, Changseiga and 12 other shamanism myths were selected in consideration of the characteristics of the oral transmission of shamanism myths. The texts of the selected myths that were included in Seo Dae-seok's book "Korean Mythology" were utilized, and the Collections of Myths by Shin(2004) were consulted in terms of narrative structure and interpretation.

.2. Analysis Categories

Five categories were selected based on child rearing views in Kim & Choi(2008), Kim & Kim(2000), Seo & Moon(2008)'s study : child value, expectations for child, child rearing belief, reality of child rearing and the others. The contents of the myths that described these elements were selected as analysis categories, and the whole texts of the myths that represented these elements were selected for analysis.

.3. Analysis Methods

The collected data were analyzed repeatedly by every collaborator to code the meanings, common denominators and themes that kept appearing in the data, and then these things were categorized into five. The categories were categorized again after the common characteristics and meaning of each category were analyzed. During the process of re-categorization, members check was implemented to root out the possible influence of the prejudice of this researcher. The validity of the arbitrary analysis results and conclusion of this researcher was checked by an early childhood professor and an early childhood Ph. D.

Characteristic of Child Rearing in Korean Myths

.1. Affective Rearing; Display of Boundless love

The shamanism myths described affectionate parents who poured endless love into their children

Sakyamuni's father and mother embraced him several times everyday, saying "My dear son, how cute and lovely you are! Where were you from? From heaven? From the ground? Through wind? Are you really my son?" They kept laughing all the time thanks to him.

<Yangpyeonbon of Jeiseokbonpuli>

My Danggeumaegi, my dear baby who turns two years old now. Look how he moves. He started to learn walking when he was an year old, and his toddling is so marvelous and cute.

<Danggeumaegi>

I put my babies to sleep after I made covers and a pillow of black sands, and they grew bigger everyday while I gave them three spoons of rice porridge each at night and asked someone else to give the breasts to them in the daytime.

They took care of their children with their utmost sincerity, and their way of displaying love was as candid and sincere as that of modern parents.

.2. Independent of Rearing ; Letting Children GO

Kim & Choi(2008) stated that in our country, parents took a child-centered view of child rearing, which is one of the characteristics of Korean parental view. That is, Korean people consider it advisable to let children take the initiative in their own lives with the help of parents instead of getting their lives to be led by their parents.

Let's go! Let's go to find our father. Where should we go? Let's go to every temple in Mt. Jiri, Mt. Taebak, Mt. Myohyang and Mt. Backdoo. Let's go to everywhere in the world. It will be okay for me to be in any place where our father is.

<Dangeumaegi>

These passages are the lines of a song that Dangeumaegi's three sons sang when they left home to find their father. They already grew up and wanted to find themselves through their father. Dangeumaegi only told them about three seeds of gourd and their father. The three sons planted the seeds and hit the road to find their father when the vine crept. They put their mother in a palanquin and overcame all sorts of adversities while they fled a long way to find their father. At that time, Dangeumaegi could encourage their adventure owing to her gentle and wise way of child rearing. She stood up for them all the time and let them take their own way sometimes. Thus, she backed them up while they took a journey to find themselves.

There were three twin brothers in a small town under Heukryongdam in Mt. Backdoo, who were born after their father died. When they turned eight, their mother got them to leave her and go their own way separately to acquire an ability so that they could make a contribution to the world....(omitted). Their mother said to them, "Now it's time for you to show what you can do. Go and find the sun...(omitted).

<Three Brothers of Samdaesung>

This is a story of three brothers who had a big fight against an evil dragon that occupied the ocean and took back the sun. Their mother raised the guardians who protected the sun, and the sons had a firm will to awaken the world from the nightmare of darkness. It's possible to find everywhere in the story that the mother taught the three sons to lead an independent life without relying on anyone else.

In the myths, the parent characters encouraged their children's will for independence or taught them to show what they could do by using some symbolic signs. As the myths mainly dealt with the stories of gods, they are obviously fictional or unrealistic to some extent. But it's noteworthy that the characters of the myths let their children go and encouraged them to win a battle with themselves. So the myths could be said to have represented independent rearing.

.3. Rearing of Destiny ; Becoming a Parenthood

Nobody is born as a father or mother of someone else. Everybody can be a parent when he or she gives birth to a child, and that is a natural yet unavoidable destiny for nearly everybody. In the myths, some of the parents accepted the fact that they were parents, and others felt anxiety, viewing child rearing as a pain and trying to avoid it. At the same time, the myths also described a general way that people looked at destiny, and showed that nobody could avoid the destiny of becoming a parent, no matter how much he or she tried to change the destiny or how much he or she rejected it.

Kim Jin-kook and Cho Jin-kook spread 100 bags of milled rice on the yard to make them exposed to cold wind and cold dew both in the daytime and at night for 100 days, and then prepared various kinds of silk, 60 thousand grams of silver and 10 nyang with all their heart. And then they carried these things to a temple named Dongdaenam Eunjungjeol.

<Seikyungbonopuli>

In the myth, the married couple tried to change their destiny by praying to god for pregnancy with all their heart. This was a will to lead a new life as parents, and most of the myths described it.

He said, "Mrs. Oknyeo, even an animal who has two youngs is said to have too many youngs, and how can a person give birth to seven children? I can't raise them because I am not rich enough to do that."

<Honam version of Chilseongpuli>

This myth shows how difficult it is to become parents by describing the attitude of Mrs. Maewha and Chilseongnim. Although they prayed in a hope for a baby and actually had babies, they weren't really ready to become parents. Chilseongnim married again with Yongye to go against his destiny of becoming a parent. He coldheartedly abandoned his children and wandered around to defy his fate, but he finally accepted his seven sons in the end, which implies that it is a human fate to follow moral laws of family.

.4. Relation Oriented Rearing

Giving a name to a child can be said to be the beginning of blood relationship between parents and their child. Parents give a name to their child as a gift of birth and as a token of their child. That is one of major elements to prove blood relationship between parents and children even though they are separated from each other.

He said, "If you give birth to a daughter, call her Halrakdeok. If you give birth to a son, call him Halrakgung." He gave her a bunch of thread and a comb as tokens and then left.

<Leegongbonpuli transmitted on Jeju Island>

That was neither porridge nor scorched rice water, but it made the visitors relax when they ate it. And then they said, "Thank you, ma'am. How can we return your favor? Do you have any grandchild? We will get him or her to be lightly sick with smallpox and be blessed."

<Sonnimgoos>

Family is the first group with whom a baby forms a relationship upon his or her birth. The myths described not only family relationship but making children benefit by giving a visitor hospitality, which indicates the importance of children's relationship with every people around them. This is similar to the way of raising children in traditional agricultural and large-family society, and shows that it's mandatory to keep good relationships with others. Apparently, this runs counter to the way of modern people's child rearing, as they just think of their own family and their own children.

Conclusion

Here follows further instructions for authors. shamanism myths are part of oral literature that has orally passed down from generation to generation among common people, and they represent the lives of contemporary people(Seo, 1997). Myths are representation of ordinary people's ideas or values rather than what represents any particular age or culture. In that sense, it seems quite worth doing to look into child rearing view in myths. This study attempted to investigate shamanism myths in terms of child rearing to find out how they described Korean people's child rearing view.

When 12 shamanism myths including Jaeseokbonpuli were analyzed, it's found that parents displayed their love freely, pour their affection into their children and let them go. Thus, there was a way of independent child rearing in the myths. On the other hand, the fact that human beings couldn't go against fate of becoming parents was described, and relationship-oriented values were also described, which placed importance on encounter and relationship with others. The characters of the myths raised their children with all their heart amid their relationship with neighbors and nature, and the sincerity of everybody concerned was required in the process of taking care of and raising a child. This is related to the perspective of looking at children, and reflects the fact that in Korean society, children have long been considered to be of great value as living creatures from ancient times. The findings of the study are expected to be of use for parent education related to traditional child rearing, for the recovery of unique Korean traditional values related to child rearing, and ultimately for the elimination of parental anxiety from parents including prospective parents.

The materials of myths aren't sufficient enough to determine the characteristics of traditional child rearing view. In the future, a wide range of oral literature such as myths, legends or folk tales should be all pieced together to look into traditional child rearing view, and in-depth research efforts should be channeled into this view in every process of child rearing involving pregnancy.

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A study on adolescent suicide ideation in South Korea

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Abstract

One of the causes for adolescents' mortality in Korea for the last 20 years was suicide. What is the most effective way to prevent adolescent suicide? What are the significant and urgent topics that must be studied to prevent adolescent suicide? By looking closely at adolescents' perceptions and experiences of suicide ideation, I expect that I could find better ways to save the students from committing suicide. I used the revision of the Suicidal Ideation Questionnaire (Reynolds, 1985). 60 respondents participated in this survey spontaneously. Through this research, the biggest thing I realized was that depression and suicide ideation are strongly related. Students felt suicide ideation for the situation itself (37%), but there were more students who wanted to commit suicide from suffering of depression (56%). 26% of students stated that the duration of feeling depression was long before they felt the urge to commit suicide. Thus, we can prevent adolescent suicide if family members, friends and teachers see their depression earlier. It means that we can help the students from the depression stage before they enter suicide ideation stage. Secondly, the reasons of suicide ideation were 'home problems' (30%), 'peer relationship problems' (26%), and 'academic problems' (22%). It reveals that our suicide ideation comes from social relationship. Third, most students relied on their close friends (50%), not teachers to solve the problems. What they needed was conversation with friends and consolation from friends (48%). Seeing these results, students thought that friends would understand their pain and worries since friends might have similar problems and understand better. Fourth, 63% of the students did not request help. They said that they did not confess since they were worried about peoples' reaction (47%). 24% of students said they were shy or scared to tell anyone. Finally, 59% of respondents said they need special activities or programs to solve suicide ideation problems. I suggest that the following are things that are needed for students feeling suicide ideation: 1) consultation from an expert, 2) a place to comfortably let out their worries, 3) a community where they can share their worries and overcome them together.

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Peer-review under responsibility of the Sakarya University.

Keywords: Adolescents, Suicide ideation

Introduction

What is the most effective way to prevent adolescent suicide? What are the significant and urgent topics that must be studied to prevent adolescent suicide? One of the causes for adolescents' mortality in Korea for the last 8 years was suicide, which has been on the top ranking for their death causes (NSO, 2012a). Adolescent suicide is a sad phenomenon in all over the social aspects. However, the suicide rate has been increasing every year in South Korea.

Adolescence is a very important period. We became adults through the physical, social, and moral development. Adolescents seem to have a tendency of breaking away from self-development, or do not want to play by the social rules constructed by teachers and parents. Therefore we try to escape from the oppressed life. These characteristics are the psychological conflicts of teenagers. Most of my classroom buddies went through these kinds of psychological conflicts. From the developmental theories including Erickson's and Freud's understanding of teenagers, I realized that our behavior is related to developmental characteristics. When exposed to environmental stresses, adolescents bring up strong impulsivity and problems (Jung, 1998; Jung, 2001; Adams, Overholser & Spirito, 1994).

In South Korea, school tests and entrance exam might be the most stress-providing factors to high school students. Jeong, Ahn and Kim (2003) revealed that high school students showed an increase in stress about their school experience and education. According to the NSO (National Statistical Office) research, in 2000, the suicide rate was only 8%. However, in 2007, the suicide rate increased up to 13%, and, in 2009, the rate increased to 16%. The suicide rate increased two times over the last 10 years (NSO, 2012b). The adolescent suicide rate within OECD nations over the last 10 years decreased from 7.7 people to 6.5 people per 100,000

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people. However, Korea's adolescent suicide rate was 6.4 on average in 2001 and increased to 9.4 on average in 2011, showing a total of 47% increase. Among the OECD member nations, Korea's adolescent suicide ranking went from 18th to 5th within couple of years (NSO, 2013).

Students seem to feel suicide ideation due to diverse reasons. They include internal conflicts such as low self-esteem and external conflicts such as insecure relationship. The relationship between the ideation to die and actual suicide is very significant (Shin, Park & Oh, 1991). According to the Korean Youth Counseling Institute (2007), 2,709 people (58.8%) answered they had the ideation to suicide. 510 people responded they attempted to suicide. Seeing this, the actual suicide rate and the ideation rate seem to be much more relevant than what has been known. 'Suicide ideation' can be the previous stage before suicide. However, studies had been usually based on targets who have already committed suicide rather than the studies on prevention or ideation (Jeong, Ahn, & Kim, 2003).

When I moved on to high school, I felt the urge to commit suicide. I frequently used to tell my friends that I wanted to kill myself for no reason. Last summer, there was a time that my friendship became bad due to some misunderstandings. The most difficult part was that I was alone. It was not only me. My other friends also had moments they wanted to die over more serious problems. One time, my friend came to me telling me about her fallen grades and said, "I should just kill myself." At that time I listened; I couldn't help them out. Few days later, they told me that just listening and having a minor talk helped them a lot. Going through these moments, I realized that we all could think of dying; minor things can help those people who want to die. Thus, I investigate Korean students' thoughts about the ideation to commit suicide.

Suicide cannot be treated after it happens. Thus, targets with danger of committing suicide should be checked and managed to decrease the level of suicide ideation. It is important to find ways for prevention by investigating students' experiences related to the ideation in committing suicide. Thus, this research is to provide fundamental information to find ways in preventing and controlling suicide. Focusing on adolescents' suicide ideation in South Korea, five research topics are developed: 1) relationship between depression and suicide ideation, 2) seriousness of adolescents' experiences of suicide ideation, 3) causes of suicide ideation, 4) solutions used by adolescents to overcome suicide ideation and 5) suggested activities and programs for helping students overcome suicide ideation.

Research Methodology

2-1. Data Collection

This research is a school based survey ideation in Y high school. 60 students participated in the survey. Data were collected based on the survey. The questionnaire I used is created by the revision of the Suicidal Ideation Questionnaire (SOQ; Reynolds, 1985), which is used to assess suicidal ideation. Respondents of 60 students are 1st, 2nd, and 3rd graders in Y high school. All respondents participated in this survey spontaneously. Of the 60 students, 27 responded that they have experienced suicide ideation. Thus, 27 students who've experienced suicide ideation participated in the survey. I got consent forms from all of the respondents, and requested them to access the questionnaire by the link I posted in Facebook. Thus all the respondents answered the questionnaire online.

2-2. Data analysis

The questionnaire was provided through Google survey program, which is one of the Google docs program. Data were also gathered automatically through Google survey program. The data analysis of Google survey program provided me the number and the percentage of respondents for each choice in each questions.

Research Result

3-1. The relationship between depression and suicide ideation

1) 27 Adolescents' experiences of depression and suicide ideation

According to the National Evidence-based healthcare Collaborating Agency (NECA), the most dangerous factor that leads adolescents to suicide ideation is depression. I focused on the relationship between depression and suicide ideation first. Table 2-1 shows students' responses to the questions about whether they have experienced depression or suicide ideation. As shown in Table 2-1, 41students (68%) answered that they have experienced depression. 27 students (45%) answered that they have experienced suicide ideation. Only 27 students who responded that they have experienced suicide ideation continued to answer next questions.

Table 2-1. Adolescents' experience of depression and suicide ideation

Feeling depression or suicide ideation	Answer	Frequency (%)
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Experienced depression	Yes	41 (68%)
	No	19 (32%)
Experienced suicide ideation	Yes	27 (45%)
	No	33 (55%)

2) The relationship between depression and suicide ideation

The responses for the questions ‘what do you think is the reason that you felt suicide ideation rather than just depression?’ and ‘what was the duration of depression being developed into suicide ideation?’ are shown as follows. In each question, three choices were provided. Respondents chose one answer among three options. Three choices for the first question were ‘the circumstance was enough to make me feel suicide ideation’, ‘long depression made me suffer, and it was eventually developed to suicide ideation’, and ‘other specific factor.’ Three choices for second question were ‘after having long depression, I felt suicide ideation’, ‘after having short depression, I felt suicide ideation’, and ‘I only felt suicide ideation without feeling depressed.’

Table 2-2. Relationship between Adolescents’ Depression and Suicide Ideation

Relationship between depression and suicide ideation	Choices	Frequency (%)
Reason that Depression was Developed into Suicide Ideation	The circumstance was enough to make me feel suicide ideation	10 (37%)
	Long depression made me suffer, and developed to suicide ideation	15 (56%)
	Another specific factor	2 (7%)
Duration of Depression being Developed into Suicide Ideation	After long depression, felt suicide ideation	7 (26%)
	After short depression, felt suicide ideation	16 (59%)
	Only suicide ideation without feeling depressed	4 (15%)

As shown in the chart above, for the question about why they went through suicide ideation rather than just depression, 10 of 27 students responded that ‘the circumstance was enough to make me feel suicide ideation.’ 15 students (56%) said that ‘long depression made me suffer, and developed to suicide ideation.’ For the question about the duration of depression being developed into suicide ideation, 7 students (26%) answered that they had ‘a long depression, and then it developed into suicide ideation,’ and 16 students (59%) answered that they had ‘a short depression, and developed into suicide ideation.’ Results show that more than half of the students went through depression before reaching suicide ideation. Depression was an important factor that made them feel suicide ideation.

3-2. The seriousness of adolescents’ experience of suicide ideation

In order to investigate how often adolescents feel suicide ideation and how seriously they felt suicide ideation, I asked the frequency and degree of adolescent suicide ideation.

1) Frequency of suicide ideation

As shown in Table 3-1, among 27 respondents, no one answered that they felt suicide ideation ‘very frequently.’ 7 students (26%) responded that they felt suicide ideation ‘not frequently, but periodically’, and 9 students (33%) responded that they felt suicide ideation ‘not periodically, but in particular situations.’ This result indicates that more than half of the high school friends felt suicide ideation periodically or in particular situations. It means that many of adolescents might have possibilities to decide to do something dangerous.

Table 3-1. Frequency and Degree of Adolescent Suicide Ideation

2) Degree of suicide ideation

With regards to the question about how seriously the students felt suicide ideation, 5 students (19%) responded that they had ‘attempted to commit suicide.’ 10 students (37%) answered that they ‘had a great ideation, but did not attempted to.’ Surprisingly, almost 70% of the students seemed to have experienced quite serious suicide ideation. There were even some students who tried to commit a real suicide. I was wondering about the reasons why young people felt suicide ideation and even attempted to commit suicide.

3-3. The Causes of suicide ideation

1) Main factors that lead adolescent suicide ideation

What are the main factors that lead adolescent suicide ideation? According to the NSO, the main reason was the academic problems (39.2%) (NSO, 2012b). To get more specific reasons, I asked 27 high school students directly.

Table 4-1. Main Reasons for Adolescent Suicide Ideation

Cause of suicide ideation	Choice	Frequency (%)
Reasons for feeling suicide	Academic problems (grade, career...)	6 (22%)
Seriousness of suicide ideation	Choices	Frequency (%)
Frequency of Feeling Suicide Ideation	Very frequently	0 (0%)
	Not frequently, but periodically	7 (26%)
	Not periodically, but in particular situations	9 (33%)
	Rarely	11 (40%)
Degree of Feeling Suicide Ideation	Attempted to commit suicide	5 (19%)
	Had a great ideation, but did not attempted to	10 (37%)
	Not very serious, but quite big	5 (18%)
	Just a slight impulse	7 (26%)
	Family problems (poverty, divorce, discord, violence...)	8 (30%)
	Peer relation problems (being bullied, fight...)	7 (26%)
	No specific reason	1 (4%)
	Other	5 (18%)

As shown in Table 4-1, ‘family problems,’ such as poverty, divorce, discord or home violence were chosen by 8 students (30%) as main factor that led them to feel suicide ideation. This result is different from the NSO study (2012b). In that study, 39.2% of students felt suicide ideation due to academic problems. ‘Peer relation problems’ such as being bullied or fight came next, chosen by 7 students (26%). 6 students chose ‘academic problems’, such as low grade or difficulty in making choices about their future careers. 5 students who chose ‘Others’ said that reasons for feeling suicide ideation come from ‘suicide of close friend’, ‘being dumped by his or her boy/girlfriend,’ ‘when the important secret was revealed to other friends’ and ‘when listening to gloomy songs.’ Through the result, it can be inferred that usually academic, family, and peer relation problems lead students to suicide ideation.

3-4. The solutions used by adolescents to overcome suicide ideation

With regards to solutions used by adolescents to overcome suicide ideation, I asked three relevant questions to 27 respondents. First, I asked whether they asked for help when they had suicide ideation problems or not. To respondents who said ‘yes’, I asked the next question, ‘to whom did you ask for help’. To respondents who said ‘no’, I asked the reason why they did not ask any help. The final question is about how to overcome suicide ideation.

1) Do adolescents ask for help about suicide ideation problem?

For the question about whether they asked someone for help when feeling suicide ideation, 10 students (37%) answered ‘yes’ and 17 students (63%) answered ‘no.’ This result reveals that half of adolescents who might have suicide ideation problems seemed to have difficulty in asking help for their problems.

Table 5-1. Asking for help to someone to overcome suicide ideation

How to Overcome Suicide Ideation	Answer	Frequency (%)
Asked for help to solve suicide ideation problem	Yes	10 (37%)
	No	17 (63%)

To respondents who said "yes," I asked "to whom did you ask for help." Among 10 respondents (37%), 5 students (50%) asked to their 'close friends.' No one answered that they asked for help to their teachers.

Table 5-2. People who the students asked for help

	Choices	Frequency (%)
To whom did you ask for help?	Family members or relatives	3 (30%)
	Teachers	0 (0%)
	Professional consultants	2 (20%)
	Close friends	5 (50%)
	Acquaintance	0 (0%)
	Others	0 (0%)

Respondents gave the specific reasons why they chose close friends, family members or relatives to ask for help. They said that 'my family members are the closest people to me' or 'it is easier to talk to family members or close friends than any other people.' They also mentioned that it is because 'close friends can fully understand and sympathize with my problems', and 'close friends are the most comfortable person to me to confess my problems.'

2) Reasons why adolescents do not ask for help when having suicide ideation problems

As Table 5-1 shows, 17 students (63%) responded that they did not ask for help. I asked them the reasons. Respondents of Table 5-2 are 17 students who did not ask for help to someone for their suicide ideation problems. 4 students answered that the reason they didn't ask for help was that they 'felt ashamed and afraid of confessing suicide ideation.' 8 students said they 'feared about reactions that would occur by my confession.'

Table 5-3. Reason why students did not ask someone for help

	Sub-choices	Frequency (%)
Why did not you ask for help?	Felt ashamed and afraid of confessing suicide ideation	4 (24%)
	Feared about other peoples' reactions that would occur by my confession	8 (47%)
	There were nobody to ask for help	2 (12%)
	Others	3 (17%)

3) Specific ways of overcoming suicide ideation

For the question asking how the students were able to overcome their suicide ideation, more than half students responded that they had gotten better as time went on.

Table 5-4. Solution method used by students to overcome suicide ideation

Method of overcoming suicide ideation 1-1	Choices	Frequency (%)
Solution for suicide ideation	Talking with parents	5 (18%)
	Talking with friends	5 (18%)
	Consulted with teacher	0 (0%)
	Consulted with consultant	0 (0%)
	Got better as time went on	15 (56%)
	Other	2 (8%)

As shown in Table 5-4, 15 students (56%) responded that "they had gotten better as time went on." 5 of 27 (18%) students answered that they overcame their suicide ideation by "talking with parents" and another 5 (18%) answered they overcame by "talking with friends." According to the respondents who answered "others," one respondent asked an advice from on-line blogs where teenagers share their common problems. Another respondent said that he played sports to get more energy. As this result shows, more than half students seemed to have not tried to overcome their suicide ideation actively, or just tried to solve their problems by themselves.

3-5. Suggested activities and programs for helping students overcome suicide ideation

1) Adolescents' needs for effective ways to overcome suicide ideation

I asked students to think about what they mostly needed (not what they had actually done) when they were suffering from suicide ideation. And I also asked them to think about what programs or activities they suggest. Choices include these questions: whether they needed a conversation with or a consolation from 1) their parents, or 2) their friends, 3) counselling with their school teachers, 4) a professional treatment from a professional consultant, or 5) Others.

Table 5-5. What students most needed when experiencing suicide ideation?

What did you need most when going through suicide ideation?	Choices	Frequency (%)
	Conversation with parents / consolation from parents	5 (18%)
	Conversation with friends / consolation from friends	13 (48%)
	Counselling from School Teachers	2 (7%)
	Professional treatment from professional consultants	6 (23%)
	Others	1 (4%)

As shown in Table 5-5, almost half of students (48%) answered that they needed 'conversation with or consolation from friends'. 6 students (23%) responded that they needed 'a professional treatment from professional consultants'. Only 2 students answered that they needed 'counselling from school teachers.'

2) Activities and programs suggested by students

The final question was about whether students need actual activities or programs to overcome suicide ideation or to solve suicide ideation problems or not.

Table 5-6. Activities and programs for helping students overcome suicide ideation

Activities and programs for suicide ideation	Answer	Frequency (%)
Necessity for activities or programs for suicide ideation	Yes	16 (59%)
	No	11 (41%)

As shown in Table 5-6, 16 of 27 students answered that they felt necessity of activities or programs for students going through suicide ideation problem. Since 11 students answered "no," there was no great difference in students' opinions on necessity for activities or programs for preventing suicide ideation. I asked the group of "yes" to suggest specific ideas for programs or activities. Specific ideas are 1) psychological test or consultation from professionals, 2) conversation with anyone, 3) programs that they can confess their stories or secret with no reason, 4) programs that they can consider about their deep ego and that provides them a place and time to have conversation with themselves, 5) they want a professional consultant teacher to stay in their schools, 6) they want to make a "healing community" to talk about and share their worry with friends who have similar problems to them.

Discussion

After moving on to the high school, there were few times I felt suicide ideation. Going through my first suicide ideation, I was not able to tell my parents, friends, or anyone else about how I felt. I thought no one would understand or even give me any advice. It was because I did not know what I exactly felt. After going through a few weeks of pain, I became helpless and lost the will. At that time, I thought 'I should just rather die.' I got better but it took a lot of time to overcome this emotion. After experiencing this, I started to become interested about the suicide ideation that Korean students go through. I held conversations with my friends about this topic and also discussed this topic at our club meeting. I then learned that many adolescents go through suicide ideation. I think it can be a serious problem for many adolescents in Korea. Therefore I have decided to write a thesis based on suicide ideation.

Suicide ideation can be the best prediction index for suicidal actions (Beck et al, 1979; Simons & Murphy, 1985). Moreover, the ultimate suicide action is the best predictive value (Fremouw, 1990). According to the NSO survey (2012b), the society where 10% of adults want to commit suicide is very unhealthy for teenagers. Teenagers who attempted to commit suicide did not have enough support from families or societies. They are regarded abnormal. Among the OECD member nations, Korea is the only country showing increasing suicide rates. In Korea, parents seem to think that going to the best university is the most important thing for teenagers.

Based on this atmosphere, grades are regarded as the most important thing in deciding life. We only chase the test scores. I dare to say that Korean adults do not think about adolescents' suicide very seriously. Based on both my own experience and my study result, what we need is not a systematic support. We just need a few words when we urgently need help.

Through this research, the biggest thing I realized was that depression and suicide ideation are related. According to Fremouw (1991), depression is a psychological disability very closely related to suicide. Also, 30% of the people showing depression committed suicide (Klerman, 1987). According to the research result, students felt suicide ideation for the situation itself (37%), but there were more students who wanted to commit suicide from suffering of depression (56%). 26% of students stated that the duration of feeling depression was long before they felt the urge to commit suicide. Thus, we can prevent adolescent suicide if family members, friends and teachers see their depression earlier. We can save the students from the depression stage before they enter suicide ideation stage.

Secondly, many students were regularly feeling suicide ideation (26%). Students who actually answered that they attempted suicide was 5 out of 27 students (19%). One of the biggest reasons students feel suicide ideation was 'home problems' (30%), followed by 'peer relationship problems' (26%), and 'academic problems' (22%). This result reveals that our suicide ideation comes from social relationship. We might not be strong enough to solve family problems by ourselves and ready for good relationship with others and social competition. Third, 10 out of 27 students (37%) requested help to solve problems. Most students relied on their close friends (50%), not teachers. What they needed was conversation with friends and consolation from friends (48%). Seeing these results, students thought that friends would understand their pain and worries since friends might have similar problems and understand better. In previous studies, the support of parents reduces the psychological pain of stress or suicide ideation (Lee & Park, 2008; Holanhan et al, 1995). As a result, friends and family members can bring a positive influence in solving suicide ideation problems of adolescents than professional consultants. Fourth, 63% of the students did not request help. They said that they did not confess since they were worried about peoples' reaction (47%). 24% of students said they were shy or scared to tell anyone. Meanwhile, 56% of respondents said that they overcame suicide ideation after time passed. Some students cannot solve their problems even after time passes. The Korean society may not provide supportive atmosphere to depressed students. If the society provide an open and supportive mood where students can be brave and open up for help, then students will actively reach for help to overcome suicide ideation and a positive change is expected.

Finally, 59% of respondents said they need special activities or programs to solve suicide ideation problems. I suggest that the following are things that are needed for students feeling suicide ideation: 1) consultation from an expert, 2) a place to comfortably let out their worries, 3) a community where they can share their worries and overcome them together. According to Ko (2013), communication is very important to prevent suicide and solve suicide ideation problems. As seen in my study, it does not have to be systematic programs executed by the government or professional training programs. However, small things such as students having the opportunity to let out their feelings and talk with someone is the true resolution. Since participants were only 60 students, I cannot generalize this result. However, this study reveals that the psychological pain and suicide ideation I and my friends felt, what is needed for students who are going through suicide ideation and their psychological conflicts. I hope more researches are made from our voices and our experiences. Adolescents' suicide ideation is a socially important problem.

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INTE 2014

A Study on instructional methods used in CAD courses in interior architecture education

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Abstract

Computer Aided Design (CAD) today plays an increasingly important role for interior architecture. 25 years ago, almost all interior architecture presentations are drawn on a paper with a pencil. Today CAD radically changes all these traditional drawing habits and it becomes an economical and technological requirement for interior architecture profession.

In this study, the instructional methods used in CAD courses are analyzed according to “CIDA 2014 Student Learning Expectations” through student surveys. At the end of the study, it is evaluated which instructional methods are more beneficial to teach “Computer Aided Presentation and Image Manipulation Techniques” in Interior Architecture Education.

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Peer-review under responsibility of the Sakarya University.

Keywords: computer aided design, CAD, education, instructional methods, interior architecture

Introduction

In order to meet the growing computer aided design talent demands, universities open expedient CAD courses for students to make them adapt to the rapid development and popularization of computer-aided design technology. CAD software turn out to be the key tool for professions such as architecture, interior architecture, industrial product design, graphic design, engineering etc. These software packages provide support to designers at gathering knowledge, sketch, 2D design, 3D design, prototyping and visualization stages of design process (Dönmez, 2013).

Interior architecture encompasses the examination of interior spaces in terms of practical, esthetical, symbolical and functional aspects and design of interior spaces according to user's physiological and psychological needs and activities (Gökhan & Ataso, 2005). Interior architecture is a multi-faceted profession that applies technical and creative solutions in order to design interior spaces (Duralp, 2006). It specializes in interior space's detailed design requirements such as colour, material, texture, lighting, heating, acoustics, furniture and all details of human use (Coles and House, 2007).

In the interior architecture education field, CAD knowledge becomes an economical and technological requirement for students and professionals in order to express the design decisions effectually. In traditional architectural design process, two-three dimensional drawings and models which gradually become more concrete are used. With the use of computers in design process, although traditional expression tools are not left aside, digital technologies are used as additional tools in visualization of design (Yıldırım and Yavuz, 2012).

Piotrowski (2004) states that interior architect should integrate the interior architecture knowledge with presentation tools and instruments. After he/she improves interior design decisions, he/she should manage to present these design decisions through appropriate instruments such as computer aided drawings, sketches etc...

Curriculum Analyses of Interior Architecture from the Viewpoint of CAD Education

The cumulative course list of Interior Architecture Bachelor's degree programs in Turkey obtained from author's previous study (Erkan, 2013) is demonstrated in Table 1.

Bahçeşehir University, Doğuş University, İstanbul Technical University and Mimar Sinan Fine Arts University are taken as a reference for the curriculum analyses. The diversities in student selection methods and university types are considered during the determination of these universities. Compulsory courses are considered and these courses categorized as five main groups during the curriculum analyses.

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Table 1. Cumulative course list of Interior Architecture Bachelor's degree programs in Turkey

Course Categories	Courses
Off-discipline courses	Foreign Languages 1 + 2 + 3 + 4 Turkish Language 1 + 2 Principles of Atatürk and History of the Revolution 1 + 2 History of the Civilization 1 + 2 Sources of Contemporary Europe and Modern Ethics Introduction to Computer and Information Systems Civic Involvement Projects 1 + 2 Introduction to University Life Economics Mathematics Common Law
Professional general knowledge courses	History of Architecture 1 + 2 + 3 History of Interior Architecture Introduction to Architecture Introduction to University Life History of Art 1 + 2 History of Design 1 + 2 Architecture in Istanbul Design Theories Basic Design
Presentation techniques courses	Architectural Project 1 and Presentation Techniques Architectural Project 2 and Presentation Techniques Graphic Communication 1 + 2 Advanced Presentation Techniques Production Drawing Drawing 1 + 2 Technical Drawing 1 + 2 Descriptive Geometry Perspective Cad Design 1 + 2
Interior architecture and furniture design courses	Interior Design Studio 1 + 2 + 3 + 4 + 5 Introduction to Design 1 + 2 Introduction to Furniture Design Furniture Design Furniture Practice Studio 1 + 2 Interior Architecture Practice Studio Graduation Project
Other profession courses	Constructional Elements 1 + 2 Construction Equipment 1 + 2 + 3 Physical Environment Control 1 + 2 Construction Material 1 + 2 Building Survey 1 + 2 Statics Strength General Lighting Conservation and Restoration Principles of Structural Systems Constructional Elements Design Natural Elements in Interior Design Space Organization

Space Organization in Houses
 Graduation Project Research
 Construction Management and Economics
 Professional Practice and Ethics
 Professional Law Knowledge
 Architectural Design Theories

The result of the cumulative course analyses points out that there are 18 Off-discipline Courses, 13 Professional General Knowledge Courses, 15 Interior Architecture and Furniture Design Courses, 25 Other Profession Courses and 14 Presentation Techniques Courses in Interior Architecture Bachelor's Degree Programs in Turkey.

Table 2 shows the scatter chart of courses in Interior Architecture Bachelor's Degree Programs in Turkey.

Table 2. The scatter chart of courses in Interior Architecture Bachelor's degree programs in Turkey

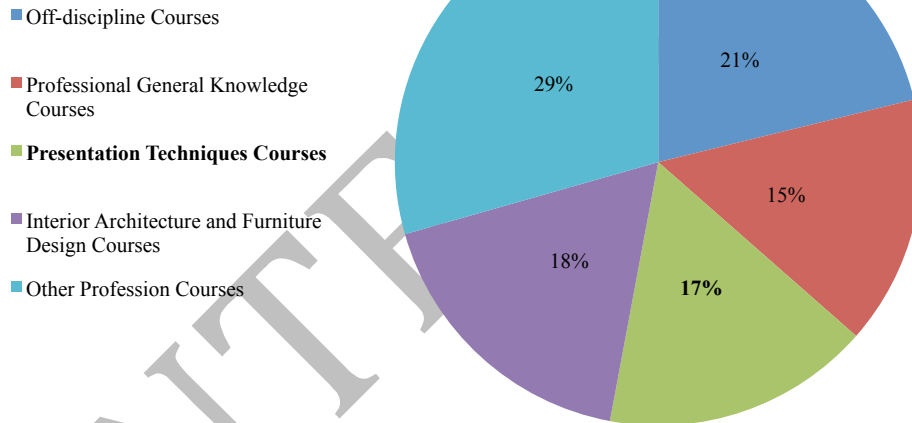


Table 2 shows that the allocation of the presentation techniques courses is 17 percentage of the cumulative course list. These curriculum analyzes shows the importance of presentation techniques courses in the interior architecture education field.

Instructional Methods Used in CAD Courses

The computer aided design (CAD) courses in Interior Architecture education can be classified as:

2D and 3D Drawing Courses

Computer Aided Presentation and Image Manipulation Courses

According to the surveys and Expert Choice criteria assessment that put forward by Dönmez (2013), software packages Rhinoceros, 3ds Max, Photoshop, Autocad, Solid Works, Corel Draw were chosen as the first six software for the design education. Five of these software packages are take part in the first category (2D and 3D Drawing) and “Photoshop” takes part in the second category (Computer Aided Presentation and Image Manipulation Courses).

The instructional methods used in CAD courses can be classified as:

Theory Based Instruction Method: This is a traditional “Teacher Centered” method. In this instructional method teacher transfers knowledge to the student verbally. He/she also can give written documents to enhance knowledge.

Invention Based Instruction Method: This method can be called as “Learning Game”. After teacher transfers knowledge about specific design and drawing tool, he/she puts forward a design problem. Students need to use learned tools to solve the design problem.

Searches and Analyzes Based Instruction Method: The instrument of this method is homework. Teacher gives homework to the student and student search and analyzes possible solutions. Teacher shows some tools such as videos, tutorials to the student to help them to find the solution.

Collaborative Learning Based Instruction Method: This method emphasizes practice in the classroom. In this method teacher shows the solution of the problem first and then solve this problem again synchronously with the students (URL 1).

Survey Study

In this study, by taking into consideration the results of Dönmez’s study (2013), Photoshop is determined as the essential “Computer Aided Presentation and Image Manipulation Course” for design students. Interior Architecture Bachelor’s Degree Programs in Turkey aim to be accredited in line with the CIDA (Council for Interior Design Accreditation) Standards. Accordingly the instructional methods used in Photoshop courses are analyzed through CIDA 2014 “Design Process” Standards. The survey study was carried out between 40 participants (students) of “İÇM 210: Computer Aided Design” course in the 2013-2014 Spring Semester. This is a compulsory course that takes part in Interior Architecture Bachelor’s Degree Program for the 4th semester students in Doğuş University.

During the semester, each instructional method applied deliberately as follows:

Theory Based Instruction Method is applied in the first three week of the course. Main purposes and fundamentals of Photoshop for interior architects are explained. General knowledge about Photoshop menus and tools are transferred to the student both verbally and documentarily.

Invention Based Instruction Method is applied in the midterm and final exam. After transferring the needed knowledge about Photoshop Tools, students are expected to design a Movie Poster in the midterm exam and Architectural Plan Visualization in the final exam by using gathered knowledge and skills.

Searches and Analyzes Based Instruction Method is applied as weekly homework.

Collaborative Learning Based Instruction Method is applied in the architectural plan visualization practices. These practices in the classroom were preliminary preparation to final exam.

The survey takes part after the final exam. In this survey, the participants (students) were expected to state their level of achievement of skills determined in CIDA Professional Design Process Standards 2014, as result of each instructional method. They give points from 1 to 10 to each category.

After the survey implemented, the data collected from each student’s questionnaire and the mean values for each instructional method used in “Computer Aided Presentation and Image Manipulation Course” calculated according to CIDA 2014 Design Process Standards.

Table 3 shows the mean values obtained from survey study.

Table 3. Survey Study: The analyze of instructional methods used in Photoshop Courses according to CIDA 2014 Design Process Standards

INSTRUCTIONAL METHODS	CIDA 2014, “DESIGN PROCESS” STANDARDS			
	Design Thinking Skills	Pre-Design Investigation Skills	Problem Solving Skills	Creative Thinking Skills
Theory Based Instruction Method	3,3	4,6	2,6	3,4
Invention Based Instruction Method	5,3	3,3	9,4	8,0
Searches and Analyzes Based Instruction Method	6,0	6,3	5,0	3,9

Conclusion

As a result of survey, Invention Based Instruction Method was chosen as the best instructional method for Problem Solving and Creative Thinking Skills. Searches and Analyzes Based Instruction Method was chosen as the most beneficial instructional method for Design Thinking Skills. Collaborative Learning Based Instruction Method was chosen as the most beneficial instructional method for Pre-Design Investigation Skills. The result of the study shows that Theory Based Instruction Method is not preferred method among the students for CAD education.

The result of survey points out that application-oriented instruction methods are preferred by Interior Architecture students for Computer Aided Presentation and Image Manipulation Courses. The prominence of Invention Based Instruction Method proves that the students find the “Learning Games” beneficial for improving their skills in CAD courses.

This study was performed to examine the instructional methods used in CAD courses at Interior Architecture Bachelor’s Degree Programs in Turkey. Advanced study can be made with the CAD lecturers to obtain their opinions and suggestions.

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A study on interactions between anonymous and non-anonymous pre-service teachers in blended learning using creative problem solving technique to enhance pre-service teachers' ability in professional practices.

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Abstract

In Thailand, many pre-service teachers are still shy and afraid to ask questions in the classroom. To enhance pre-service teachers' ability, pre-service teachers need to show their potential and should be encouraged to participate in the class. This paper aims to study the pre-service teachers' interaction and participation in the online mode in terms of blended learning using creative problem solving technique. The sample group of this study was 28 pre-service teachers. The first group was treated anonymously when they were online while the second group was treated non-anonymously.

The findings found that the group that was treated anonymously had the mean (\bar{X}) of online interactions increasing from 196.33 counts to 218.66, 313, and 331.33 for the subsequence weeks. For Non-anonymous group, the mean (\bar{X}) of online interactions was decreased from 333.50 counts to 292, 205, and 232.50 for the subsequence weeks.

Further in-depth interview showed that pre-service teachers in the anonymous group were happier to participate in the discussion. They enjoyed interacting with others online. Therefore, the different settings and the environment of online class could provide the different trend of interactions for different types of identity presented in the online group.

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Peer-review under responsibility of the Sakarya University.

Keywords: blended learning; online learning; online interaction; creative problem solving; pre-service teacher

1. Introduction

One of problems that Thailand is facing is that students do not participate much in course activities. Interaction is one of the most important things in teaching and learning in web-based learning and it can be argued that the success or failure of online learning depended on the quality of interaction (Woo & Reeves, 2008). Thai students are shy and afraid to lose face if they answered question incorrectly or their answers are not being accepted by others. Ng'ambi (2008) stated that text is the outcome and medium of online interaction, which it could show the intention and need to be interpreted. Interaction can be online learning spaces that students engage in the topic that they are motivated by a common goal (Saade & Huang, 2009). Researchers and educators have been trying to solve this problem. In learning via website, the website provides opportunity for pre-serviced teachers to interact with others anonymously or non-anonymously. These options give different advantages and disadvantages. For anonymous learning, students have ability to participate in the activity without knowing their identity. They can answer or respond with confidence. They can interact, chat or discuss with anyone without afraid of being judged. They are treated equally. However, without knowing identity, for those who are ignore the activity, it is difficult to motivate them to response because the teacher does not know who they are. In non-anonymous learning, teachers know who they are and can motivate them to participate in the activities and can maximize student's potential. However, pre-serviced teacher would be more hesitate to interact with others because they are afraid that they input would not be accepted.

2. Objective

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This paper looks into pre-serviced teacher interaction in blended mode of learning by using creative problem solving technique to enhance their potential in online learning, select type of online interaction, and optimize the teaching style.

3. Research Sample

The sample was 28 pre-serviced teachers from Prince of Songkla University, Pattani Campus who registered for technology and innovation course in first semester of year 2012. They were separated into two groups: the anonymous online learning group and the non-anonymous online learning group. The anonymous online learning group had 14 pre-serviced teachers and they were assigned to work in 3 small groups of 4-5 people. The non-anonymous online learning group consisted of 14 pre-serviced teachers and they also worked on a smaller group of 4-5 people each.

4. Methodology

This research was conducted during July – August 2012. The methodology was divided into three stages as shown in Figure 1.

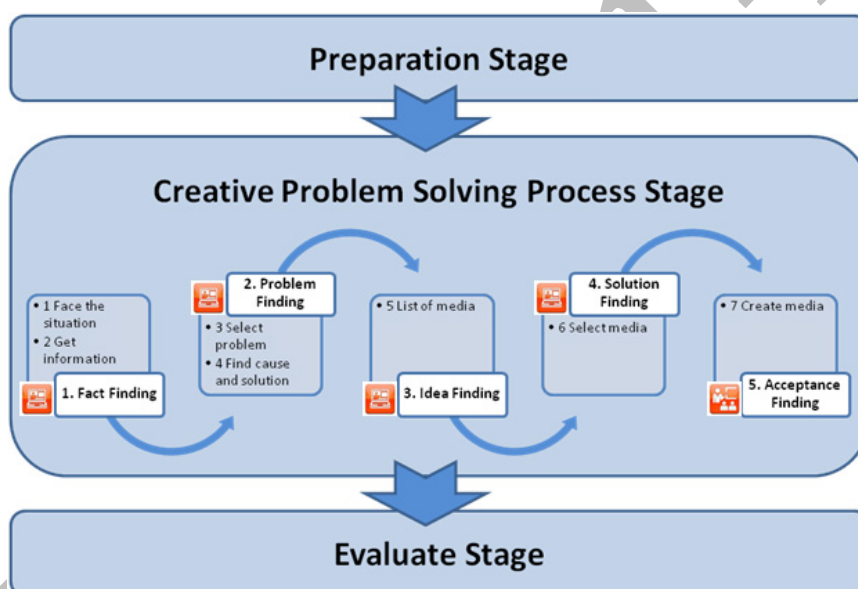


Figure 1 Stages of problem solving technique activity.

- The first stage was preparation stage. Instructor explained the tasks to be done, how to access tools. After preparing students, students would be grouped to small group (4-5 persons per group), the instructor explained the role in the group and let the member in each group assign role to do activity in the group as below:
 - Group's leader: have duty to bring group member to do group activities,
 - Group's secretary: have duty to summarize the group issues and report the group's activities to instructors.
 - Group's member: have duty to participate in group activities give the opinion in discussions in the topic
- The second stage was the creative problem solving process stage. Pre-service teachers were asked to complete the tasks using creative problem solving technique via blended mode of learning. The time frame for these tasks was 5 weeks.
 - First week involved fact finding process. This task was to be done online. Their activities consist of interaction via web board and chat room. The instructor showed the 3-4 problem situations to pre-service teachers. Then group members discussed among the group to select one of the situation to use in group activity process then

group members report the result of situation selection with the reason to the instructor. After the group got situation to use in group activity process the group members discussed and brainstormed to get the information from the situation. The students may use questions what - when - where -why and- how to ask and answer to get information from the situation; then group members reported the conclusion of the information from the situation to instructor.

- Second week involved problem finding process in online based learning. They would do their tasks via chat room and web board. The group members discussed and brainstormed in the information from previous step to analyze what was the problem from information; the students had to list the problem as much as possible, then group members brainstormed to sort the problems which one group had listed by the importance and should be solved first and picked one of the problem to solve and clarified reason to the instructor. After getting the problem group members discussed and brainstormed to get the cause of the problem as much as possible and find solution to solve cause of the problem, then reported the cause and solution of problem to the instructor
- Third week was about idea finding process and it would be done in online based learning. Pre-serviced teacher would communicate via chat room and web board. They would present and collect variety of solutions during this week. The instructor let group members consider: “students have to be an educator or a media production specialist that you’ll create to solve the problem in previous step” group members discussed and brainstormed to list type of media to create as much as possible then report to instructor.
- For fourth week, the task was related to solution finding process in online based learning. Again, they need to interact via chat room and web board. The group members discussed and brainstormed analyze advantages and disadvantages of each solution, and analyze, evaluate, organize solution, set criteria for selecting media, and consider the best media. Selected one type of media to create with the reason why they selected and reported to instructor.
- Final week, their task was acceptance finding process. This task was conducted in classroom based learning. The activities in the classroom are applying the selected media from the forth week to solve the actual problem. The group members created media they selected in the previous step and test in the situation then report to instructor.
- The third stage was evaluation stage. Pre-serviced teacher would present their work.

5. Findings

In the first process: the fact finding process, it was the first online interaction for both groups. Pre-serviced teachers would select the problem situation and study the fact on that specific problem situation. Instruction would assign the situation that was a problem to the pre-serviced teachers. In the anonymous learning group, there were not many discussions. The leader of the group could not successfully motivate members to brainstorming. The instructor had to facilitate and motivate pre-serviced teachers to exchange their opinions in the activity. For the non-anonymous group, they could gradually continue implementing the discussion. They chatted in both the focused topic and not related to the topic. They could interact in the process successfully. During this process, the average count of interactions for anonymous learning group and non-anonymous learning group are 196.33 and 333.50 times respectively.

In the second process: the problem solving process, pre-serviced teachers had to find the problem in the selected situation in the previous week. They then selected the most important problem that required urgent solution. During this process, the anonymous learning group was still shy. The instructor needed to assist with the discussion, but not as many as the previous week. Some of the subgroup could lead the brainstorming by themselves, but not as good as the instructor needed. For non-anonymous learning group, the discussion and brainstorming went well. They started to participate in the brainstorming. Some subgroups had appointment outside the class to discuss about the assignment. During this process, the average count of interactions for

anonymous learning group and non-anonymous learning group are 218.66 and 212.00 times respectively.

In the third process: the idea finding process, pre-serviced teacher collected the instructional media that could be used to solve the selected problem as many as they could. In anonymous learning group, they started to get familiar with online brainstorming and also with each other. They were less shy and the brainstorming environment was getting better. They started to chat with each other more. In non-anonymous learning group, some pre-serviced teacher obviously participated in the interaction, while some of them were less participated in the interaction. During this process, the average count of interactions for anonymous learning group and non-anonymous learning group are 313.00 and 205.00 times respectively.

In the forth process: the solution finding process, pre-serviced teachers selected media from the collected list from the previous step. They needed to consider advantages and disadvantages of each type of media, and the suitability of the media to solve the problem of that situation. After this process, the identity of the members in the anonymous learning group would be revealed in order to continue with the next step. During this process, the anonymous learning group had a lot of discussion including guessing who is who. For those in non-anonymous learning group, the discussion was mostly from the same persons. Some of pre-serviced teachers had gone from the discussion. The instructor needed to motivate them once in a while to make them active in the online interaction. During this process, the average count of interactions for anonymous learning group and non-anonymous learning group are 331.33 and 232.05 times respectively.

There was different in number of online interaction between anonymous learning group and non-anonymous learning group. The finding showed that the average numbers of interaction between these two groups during four weeks of online interaction was not significantly different. The anonymous learning group had the average count of 1059.33 times, where non-anonymous learning had 1063. With further investigation, it was found that anonymous learning group tended to have more online interaction over the weeks. The average count for interactions was 196.33 times, 218.66 times, 313 times and 331.33 times respectively by week. In contrast, the non-anonymous learning group tended to have less online interactions over the weeks. The average count for interactions was 333.50 times, 292 times, 205 times and 232.50 times respectively.

Table 1 below shows the summary of average number of counts for interactions in each group.

Week No	Creative Problem Solving Process Stage	\bar{X} of Interactions	
		1 st Group*	2 nd Group**
1	Fact Finding Process	196.33	333.50
2	Problem Finding Process	218.66	292.00
3	Idea Finding Process	313.00	205.00
4	Solution Finding Process	331.33	232.50
Total		1059.33	1063.00

* Anonymous Online Learning Group

** Non-anonymous Online Learning Group

6. Discussion

There was also found that the feeling of these two groups was different in terms of using creative problem solving in their online interaction. The anonymous learning group hesitated to participate at first. They felt that they did not know others and felt shy to share their idea with people that they did not know the identity. As the time passed, this feeling had dissolved. They started used to each other and started to guess who is who in their online learning activities. Terumi & Terry (2011) stated that pseudonym-based activities are effective to provide higher production with less stress. The identity was revealed after the forth week and some of them felt surprise to know the identity of those who answered and shared idea over the past four weeks. While non-anonymous group had fun discussing with their friend online and enjoyed using online tools at the beginning, the trend of online interaction was decreased over the weeks. They felt that it was their job to discuss online. They did not feel that they enjoy doing it. Some of them moved the discussion outside the system. Since they know the identity of each other, they could call, email, or have meeting in person. However, Smirnov (2013) argued that the real name users or the non-anonymous group was more suffer in performance penalties that were avoided by those with pseudonym.

The feeling of instructor who facilitate the also was different in terms of facilitating anonymous group and non-anonymous group. The instructor played an important role in facilitating both groups. Instructor requires

careful planning to improve the interaction (Woo & Reeves, 2008). In anonymous learning group, the instructor faced the difficulty in motivating members to share their opinion with others who they did not know the identity. Once the pre-serviced teachers used to the system, the role of instructor as facilitator was reduced. However, the instructor still needs to control the environment of the discussion. The decisions of the instructor can structure the classroom environment and reduced the complication of those who had difficult relationship and can make them success in the class and continue participate in the class interaction. In non-anonymous learning group, the instructor did not find much problem in the beginning, however, the problem has been found at the end when many pre-serviced teachers had moved discussion outside the system. Thus, the instructor needed to motivate them to participate and interact in the online system. Irby, Wynn, & Strong (2012) stated that students were interested in participating and interacting with other classmates during eLearning and also appreciate the facilitating of the instructor.

7. Recommendation for future research

In this study, the researcher studied the online interaction via the creative problem solving technique for four weeks. The analysis showed that the trend of interaction in anonymous online learning group had increased while the interactions in non-anonymous group had decreased. Thus, it would be interesting to extend the period of conducting the research to see the interaction between these two groups.

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A study on investigation of the relationship between mobbing and depression according to genders of high school students

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Abstract

The aim of this study is to define the depression symptom levels and the mobbing executions' levels they are subjected to according to genders of vocational high school students. The ranks of being subjected to mobbing and the depression levels are examined via the genders of the students. According to the findings, there is a significant correlation between the genders of the students and being subjected to mobbing, but there is no statistical correlation between genders of the students and the occurrence of depression symptoms. As a result of the statistical analysis, even though the male students are subjected to mobbing more than the female students, there is no statistical difference between the levels of depression symptoms.

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Peer-review under responsibility of the Sakarya University.

Keywords: Gender, mobbing, depression

1. Introduction

Gender is a feature that is examined by various disciplines and in a many different ways. This feature has been the study field of science and technologies such as biology, social sciences such as sociology, anthropology beside health science and physiology (Dökmen, 2004). Gender is the inherent genetic, physiological and biological features of the individual as being male or female. In this context male and female individuals differ in their biological features (Akin, 2003).

The socially identified characteristic features of males and females; is defined as socially structured roles, responsibilities and behaviors. For this reason, while defining the social gender as a cultural and learned feature; not the biological differences but the view of society about males and females their senses their thoughts and expectations on behaviors, social values and roles are defined (Dökmen, 2004; Yılmaz et al 2009). The point of view to gender can be changed culture by culture also can be varied with the people who are in the same culture by the time. The individuals behave according to the values given by the society while they are performing their roles they have (Şimşek, 2011; Terzioğlu, 2003).

Gender roles which should be addressed in terms of both gender, such as the roles and the expectations that are given by the society because of the individual's gender, and social sexism occurs can affect the health of both genders. Social gender discrimination structures the lives of women and men and finally this variety means much more than difference (Akin, 2007).

Gender and Mobbing

In general mobbing can be explained as non ethical and inhospitably manners or forces those are directed systematically, planned, continually repeated by one person or more people to a person or a group working in institutions (Leymann, 1996; Kök, 2006; Özler et al., 2008). As the studies about the relation between mobbing manners and genders examined in literature, in accordance with the versatile roles and the expectations loaded on genders by the society according to their status. It is realized that sometimes against men, sometimes against

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women and sometimes against equally for both genders.

In a study held on lawyers in USA, it is stated that women lawyers are subjected to mobbing more than their men colleagues at the Office (Meglich, 2008). Also a meta-analysis study held by Rutondo et al. (2001) has stated that women feel mobbing behaviors more rigid than the men, supporting the previous view.

Nonetheless in many studies, it is observed that both women and men are almost equally subjected to mobbing manners (Keashly et al., 1994; Leymann, 1996; Einarsen, 2000; Vartia, 1996). In a study held on assistant doctors (a status both student and medical doctor), it is examined that there is no meaningful difference according to gender with the mobbing perceptions of the assistant doctors (Dikmetaş et al., 2011). Again, the study results held by (Baş & Oral, 2012) showed that there is no meaningful difference between males and females' subjection to mobbing manners. This view is also supported by another study held by Koç and Bulut (2009) on teachers that gender doesn't create any meaningful difference on subjecting mobbing manners.

In schools, male students are subjected to mobbing behaviors two-third more than female students. Male students use physical force or threat while female students are doing this with indirect way such as gossip, kidding and social exclusion. Even though male students behave despotic to both male and female students from different classes, female students choose the girls in the same class or at the same ages as their victims. At the studies it is found out that male and female students are equally subjected to mobbing manners (Roland, 1989; Elliot, 1992; Olweus, 1995). But the study held by Houbre et al. (2006) shows that while the rate of female students' as tyrant is less than male students, the rate of female students is more than male students as victims. The study of Chapel et al. (2004) has also supported the view of Houbre et al. (2006). Therefore in a study held by Altınöz et al. (2010) with college students, it is examined that male students have been subjected to mobbing manners more than female students.

Gender and Depression

Depression is one of the most important problems observed in humans. Depression is described as a situation covers continuous and intense sadness, hopelessness, anxiety, slow down in thinking, talking and movements, stagnation, worthlessness, meanness, weakness, reluctance, and slow down at physiological functions (Wells and Sturm, 1995; Erim, 2001). Due to a theory developed by Beck et al. (1979), the reason of depression is not an affect defeat mainly but a cognitive disorder. Some of the studies related on depression epidemiology stated that depressive symptoms are 13-20% seen in the community although they don't meet the diagnostic criteria (Boyd & Weissman 1982; Gelder et al., 1989).

In some studies investigated the relationship between gender and depression, it is observed that there are meaningful differences while there is no significant relation in the other studies.

In these studies, there is a significant effect of the criteria uses on the results such as the quality and the quantity of the sample group selected, perception level of the subject, coherence of the measurements. That has been used, the studies made by survey or made in clinical conditions. Waelde et al. (1994) states especially that there are conflicts about the gender difference in depression in the subclinical samples.

In the studies held in different countries and cultures it is observed depression cases of women are two times more than men (Piccinelli & Wilkinson, 2000). It is commonly accepted that the gender-specific differences at depression is coming from interaction of many factors including biological, physiological and socio-cultural impacts (Kornstein, 1997). Although it is not known exactly why the incidence and prevalence of depression in women is higher, it is explained by more hormonal changes, social norms and to encounter different stressors (Doğan, 2000). Hormonal factors can mainly affect this high ratio. If a man realizes he is depressive, he is reluctant to demand help but women can share their depressive moods easier than the men (Sandoz, 2012). However it should be considered that men cannot be determined easily because it cannot be acceptable for men that they got into a depression so they don't go to the doctor. According to Bayar (2014), incidence of depression in women and men can be classified as; 1.Married man, 2.Married women, 3.Single or widowed woman, 4.Single, widowed or divorced man, 5.Separate living and divorced man.

According to Yıldırım (2004), gender variable significantly predicts the depression. The average of female students' depression scores is appeared significantly higher than the average of male students' depression scores. Kapıran (2001) has stated that the differences in the relation between gender and depression is significant and contrary to girls in a study held on high school students.

In the studies of Erözkan & Öy (1995), it is found out that depressive tendencies are differentiated in terms of

genders and it is emphasized that the vulnerability of female students after depression is more than male students. In a study held by Garrison and Jackson (1990), it is stated that females are getting higher scores than males and it is found out that girls have more depressive symptoms. Tubman & Windle (1995) have concluded at their studies that showing depressive symptoms at a high level is related with being female student. In another study they had found that female students have more depression scores than male students in all depression tests (Lewinsohn & Hops, 1993). The studies of Jolly and colleagues support this diagnosis (Jolly et al., 1994).

Despite that according to Dökmen (1998), although it is mentioned that women are more depressed than men by the findings, in this research no strong correlation has been found between depression and gender. In a study held on university students it is concluded that gender is not an efficient factor on depression (Ceyhan et al., 2009). In a similar study depression rates of girls and boys are comparable at lately adolescence period (Ehrenberg et al., 1990). The study that has done by Aydın (1998) on university students there are findings such as the depression symptoms of students are not vary with gender. At the study of Hisli (1998) as a result of the comparison gender by depression, it is found that there is no significant difference between averages by both variables. In the study of Dökmen (1997) held on gender and gender roles with depression, no significant difference found between males and females. At a study of Gökçakan (1997), although the percentage of depression is higher at girls than boys, the difference does not mean that depression is more common in girls than boys statistically. Again in a study made by Aydemir et al. (1996), it is found that gender has no effect on depression. At the study held on university students by Erözkan (2005), there is no relation between gender and depression.

As a result, we can declare that gender difference has a cultural supported effect rather than biological effect on depression (Silverstein & Perlic, 1991). At the studies held on depression, the rate differences between males and females are related with the gender roles occur by the specialties of division of tasks and cultural differences together with biological affect (Küey & Cengiz, 1993).

2. Method

2.1. The Importance and the Aim of the Study

In this study university students in vocational high schools are examined by survey methods in which level that they are subjected to mobbing behaviors expressed by them by survey method and the level of depressive symptoms observed in terms of gender. The aim of the study is to state the relation between the students at universities' vocational high schools being subjected to mobbing and depression and also the level of the depression according to their gender. This study is important to bring up the differences and the levels of both genders that are subjected to mobbing and their depression symptoms observed in consequence of the social judgments, values, roles and expectations that are imposed by society to women and men. The awareness of gender-specific characteristics will contribute to individuals to develop a consciousness and a mentality contrary to mobbing and depression that affects private and social life of the gender negatively. In this context the explication of the relations between gender-specific characteristics and mobbing and depression will provide to manage and control mobbing behaviors and measures can be taken against depression.

2.2. The Method of Collecting Data

In the study, questionnaire was used as the method for collecting data. The surveys have been answered face to face by the university vocational high school's students. Questionnaire consists of four sections. In the first section a scale consisting of 40 questions was used to define levels that the students are subjected to mobbing behaviors. In the second section there is a scale consisting of 21 questions prepared to identify the students' psychological moods. The study has been done between 06.05.2013 - 10.05.2013. The information about the scales used is given under the title 'Data Collection Tools'.

2.3. Limitation and Sampling of the Study

This study has been done in vocational high school students connected with Akdeniz University. The questionnaire has only been applied on the students attending to second class because the school years are believed to influence the personality structure of the students. The study's main mass consists of Vocational High School of Social Sciences of Akdeniz University. Totally 300 students have been participated at the study. Because the variety of survey and number of questions were allot, many of and/or some of the questions 29 of the surveys excluded from the study. The volume of mass including active first and second class students was 2160, the volume of sample including only second class students was 271. Sampling ratio of the main mass is 12,5%. Lean Incidental Sampling has been chosen from Probability Sampling Technique to meet the required sampling.

2.4. Data Collection Tool

Survey of Mobbing

On the survey to examine the students' mobbing subjection level, a survey form consisted of 45 questions, named "Leymann Psychological Mobbing Scale" was developed by Leymann (1996), one of the first observers on mobbing and Negative Behavior (NAQ) Scale consisting of 14 questions that has been developed by Einarsen and Rakness (1997) and Salin (2001) was used to prepare a questionnaire consisting of 40 questions. As a result of reliability search of the mobbing survey scale created, overall reliability coefficient Cronbah's alpha has been found as 0,969. This value means $0,80 \leq 0,969 \leq 1,00$, the scale is highly reliable (Kalaycı, 2005).

Survey of Mental Situation Analyze

Beck Depression Index is a self-report scale developed by Beck (1961) to survey emotional, cognitive, somatic and motivational components. BDI is a tool to provide information by oneself is mainly used at the studies and clinics. The overall reliability coefficient of the depression scale consisting of 21 questions used in the survey has been found as Alfa=0,881. This value means $0,80 \leq 0,881 \leq 1,00$, the scale is highly reliable (Kalaycı, 2005).

2.5 Structure and Hypotheses of the Study

By the scales used in this study the level of the students' subjection to mobbing behaviors in terms of gender is determined and the students' depression situations are observed. Thus the relations between the students subjection to mobbing behaviors in terms of gender and depression situations are observed. The hypotheses appearing in the study are classified below:

1. H1: There is a meaningful relation between the students' genders and being subjected to mobbing behaviors.
2. H2: There is a meaningful relation between the students' genders and their depression situations
3. H3: There is a meaningful relation between the level that the students are subjected to mobbing and depression.
4. H4: There is a meaningful relation between the level that the students are subjected to mobbing in terms of gender and depression levels.

2.6. Data Analyze Method

SPSS 16.0 for Windows program has been used to analyze the data in the study. At the program SPSS 16.0 for Windows in Alpha Model the data reliable analyze has been done. Cronbach's Alpha Method that is used to survey reliability of multivariate scales has been used at the test. The overall reliability of scales of Alpha values is shown in the 'Data Collection Tool' Part.

3. Findings

Findings on the Relation between Gender and Mobbing

The first hypothesis of the study is "H1: There is a meaningful relation between the students' genders and being subjected to mobbing behaviors." At the analysis of this theory "t-Test" is used. The results of t-Test used to define whether if there is a difference in mobbing perception in terms of students' genders are shown in the Table 1.

Table 1. The Relation between Gender and Mobbing

GENDER TYPE		N	Average of Participants		Standard Deviation
MOBBING PERCEPTION	Female Students	142	1,9225		0,03614
	Male Students	129	2,1935		0,05832
Variance Distribution		Levene Test for Variance Equality		t-Test for Averages Equality	
		F	Sig	t	df
Equal Distribution		14,323	0,000	-4,032	269
Unequal Distribution				-3,954	216
					Sig.(2-sided)
					0,000
					0,000

According to the results of the participants' analysis, the average of female students (N=142) 1,9225 and male students' average (N=129) is 2,1935. This average shows that male students' perception of mobbing is more than female students' perception. Significance level at Levene Test is (P= 0,000) which is lower than critical value Sig.0,05. From this can be understood that the variances of the two groups are different. As the variances are different $t = -3,954$ at Unequal distribution line and correspondingly value P= 0,000 is taken into consideration. The result of Sig. (2-sided) also shows that (P= 0,000) there is a difference between male and female students levels that they are subjected to mobbing. In this context alternative hypothesis (H1) has been accepted.

Findings on the Relation of Gender and Depression

The second alternative hypothesis of the study is such as "H2: There is a meaningful relation between the

students' genders and their depression situations. In this theorem's analysis t-Test is used. The results of t-Test which is used to define whether if there is a difference on the perception of depression in terms of students' genders are shown in the Table 2.

Table 2. The Relation between Gender and Depression

GENDER TYPE		N	Average of Participants		Standard Deviation
DEPRESSION PERCEPTION	Female Students	142	1,6338		0,80318
	Male Students	129	1,7132		0,95356
Variance Distribution		Levene Test for Equality	t-Test for Averages Equality		
		F	Sig	t	df
Equal Distribution		6,459	0,012	-0,743	269
Unequal Distribution				-0,737	251
					Sig. (2-sided)
					0,458
					0,462

According to the results of analysis measured by T-test the average of female students 1,6338 and the average of male students is 1,7132. This average means that male students' perception of depression is more than female students' perception of depression. Significance level at Levene Test is ($P = 0,012$) lower than critical value Sig.0,05. Hence the variances of the two groups are different. As the variances are different $t = -0,737$ in Unequal distribution line and correspondingly value $P = 0,462$ is taken into consideration. The result of Sig. (2-sided) also shows that ($P = 0,462$) there isn't a significant difference between male and female students' depression levels. Thereby the alternative hypothesis (H_2) has been rejected. Nevertheless although there is no significant difference statistically, it is seen that the average of male students' perception of depression is higher than female students.

Findings on the Relation between being subjected to Mobbing and Depression

The third hypothesis of the study is that "H3: There is a meaningful relation between the level that the students are subjected to mobbing and depression." While this theorem is analyzed by t-Test (Table3), it is observed that there is a significant difference with the two variables. In this context alternative hypothesis (H_3) has been accepted.

Table 3. The Relation between being subjected to Mobbing and Depression

Variable Name	Average of Participants	Standard Deviation	Dependent Two-Samples Correlation	Confidence Interval (%95)		Sig. (2- sided)
Mobbing	2,0517	0,56855	0,324	1,9837	2,1197	0,000
Depression	1,6716	0,87722		1,5667	1,7765	0,000

According to the results of the analysis, 271 students' average of being subjected to mobbing is (2,0517) and average of depression is (1,6716). At 95% confidence interval, the value sig (2-sided) is lower than 0,005. Also the confidence bounds of Mobbing and depression are not concurred. Thus we can state that there is a significant difference between mobbing and depression. The correlation between mobbing and depression is 0,324. On the regression analysis, the ratio of depression description by mobbing is 10,5%. We can say that the relation between mobbing and depression is not high and the rate of depression description of mobbing is low.

The fourth hypothesis of the study is that "H4: There is a meaningful relation between the level that the students are subjected to mobbing in terms of gender and depression levels." "Chi-square Test" is used to analyze this theorem. In the study it is examined that whether if there is a difference between male ($N=129$) and female ($N=142$) students according to they are being subjected to mobbing in terms of gender and depression levels (Table 4).

According to the results of the analysis done by Chi-square Test in Table 4, it is observed that at the Figure values the number of values which are expected to be lower than 5 are higher than 20% of total figure values. Therefore Chi-square test Linear-by-linear Association values are used. It is not stated that there is a significant difference statistically between the levels of being subjected to mobbing and depression in terms of gender.

Table 4. The Relation between being subjected to Mobbing and Depression In Terms of Gender

Mobbing Perception	Depression Perception	Gender		Total
		Female Students	Male Students	
I	I	16	6	22
	II	2	0	2
	III	0	1	1

	IV	0	0	0
	Total	18	7	25
II	I	61	60	121
	II	37	22	59
	III	19	18	37
	IV	1	1	2
	Total	118	101	219
III	I	0	4	4
	II	2	1	3
	III	1	5	6
	IV	2	0	2
	Total	5	10	15
IV	I	1	5	6
	II	0	0	0
	III	0	0	0
	IV	0	6	6
	Total	1	11	12
		Table Value	df	Sig. (2- sided)
I (Linear-by-Linear Association)		0,688	1	0,407
II (Linear-by-Linear Association)		0,282	1	0,595
III (Linear-by-Linear Association)		2,423	1	0,120
IV (Linear-by-Linear Association)		1,000	1	0,317

4. Conclusion

Society's gender perspective can vary from culture to culture but also it can be ranged between individuals at the same culture by time. Nevertheless gender notion causes significant differences on women and men, their family, school, career choices and their lives. Thus women and men act according to judged values that are defined by the society while playing their roles at the society. These value models and formed roles impose ridiculous psycho-social impositions, cause to be subjected to mobbing and thus cause some troubles that can be up to depression.

In this study, in the consideration in terms of gender related to interpersonal sensitivity it is occurred that male students have been subjected to mobbing behaviors more than female students. In lots of studies female students subjected to mobbing at high levels or it is found that there is no significant difference between male and female students at the situation that they are subjected to mobbing. Although at a study held by Altınöz et al. (2010) on vocational high school students, it is stated that male students have been subjected to mobbing more than female students. Also on this study, the rates of male students have been subjected to mobbing are higher in comparison with female students. As it is seen there are parallel results in both studies affected by a lot of factors such as vocational high school students' society, the school and the student groups. Especially, the students cannot win a bachelors' degree; are primarily placed in vocational high schools in their localities with their preferences by passing without examination system. In this context it is appeared that the male students which have been placed in vocational high schools in their localities(at their cities or towns) are doing mobbing behaviors towards especially male students coming from the other cities and towns in a systematic and conscious way.

In this study, it is not stated that there is a significant difference in terms of gender on depression statistically. According to Erözkan (2005), actually a significant relationship can be expected between gender and depression. However considering in the context of university, both male and female students are living in similar conditions (such as exams, economic conditions, accommodation conditions, fellow and romantic relations) because of that there can be no difference with their depressive mental positions. Besides, each individual person may occasionally experience depression in current conditions (Erözkan, 2005). It is found that depression is experienced by women more than men in many studies. Conversely in the studies held by Hisli (1989), Ehrenburg et al. (1990), Aydemir et al. (1996), Dökmen (1997;1998), Aydın (1998), Gökçakan (1997), Erözkan (2005) and Ceyhan et al. (2009), it is stated that there is no effect of gender on depression. The results of these studies have similarities with our study as there is no difference between genders on depression.

When sex discrimination is not taken into account there is a significant difference between being subjected to mobbing and depression, meanwhile considering the relationship in terms of individuals' genders, it is observed that there is no significant difference (relation) between the levels that they are being subjected to mobbing and depression levels (Fig. 1). According to these findings while there is a difference between the situation of males and females that they are being subjected to mobbing, it can be defined as the depression levels of males and females which have been subjected to mobbing are almost equal to each other (no significant difference). It is

expected that this study will contribute to the other studies that will be held on students of vocational high school in future.

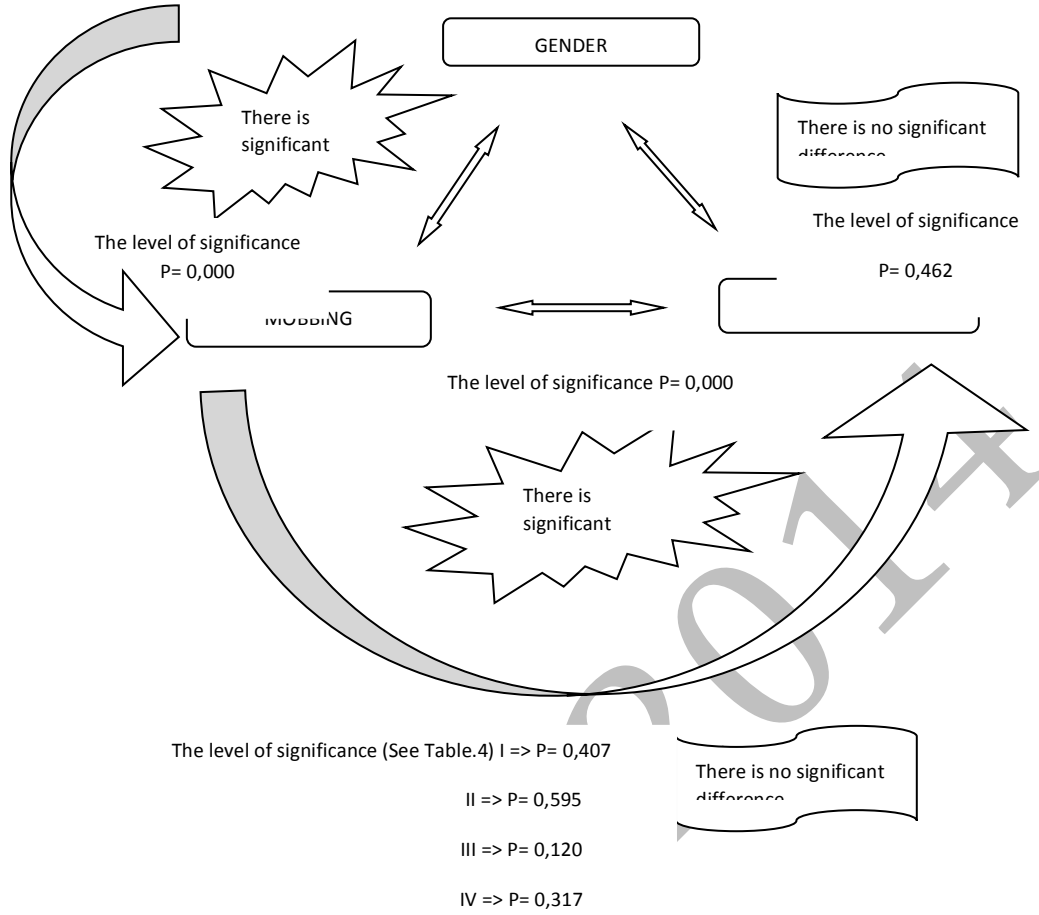


Fig.1. The Relationship between Mobbing and Depression according to Genders

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A study on the class of education that builds students' character through films - classes at the university of liberal arts.

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Abstract

The purpose of this study is to use films character education lessons to be enabled. First, this study is a model of teaching character education through film that would be proposed. Second, using film character education lessons will be conducted in a real university. Thus, the satisfaction of students will be examined. Third, using film to demonstrate the effectiveness of character education classes would be. Finally, the use of film in teaching character education curriculum according to the character would be proposed.

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Peer-review under responsibility of the Sakarya University.

Keywords: Film, Character education, Classes at the University of Liberal Arts.

Research overview

1. The purpose of the study

The purpose of this study is to utilize an integrated model of character education by using a film which has relevance and by using the professor's interpretation for university students and to find out educational efficiency and the satisfaction of students in Korea.

2. The target and the period of study

An experiment was conducted with 260 students divided into 8 classes of liberal arts which is called "Character education lessons" in the first grade of Baekseok University. The length of this study was during a 15 week period 27th Aug, 2013 to 19th Dec, 2013. This study was carried out during the 15-week course, 3 weeks for lecture only, 3 weeks for the PPT and lecture only, 3 weeks for film only, 5 weeks for film and lecture only and one week for survey. Based on the data, the results of the study are listed below.

The survey along with the work showed that students' interest and expectation on improving their character ability were fairly high. After the lesson, learners improved character ability to handle problems in a variety of situations. The outcome was that the experimental class in which the students needed to participate in actively had a higher student concentration rate than that of the controlled class in which students used only a text book, lecture and PPT only. It was shown that the suggested model using a film increased the learner's motivation, interest, and desire in the classroom.

3. Research methods

The experimental group that took the classes by using a film which had relevance showed more positive results in their satisfaction than the control group's by not using a film. In order to demonstrate the efficiency of the model for character education lessons by using a film, learner's satisfaction were analyzed through independent sample t-test. After the class, the p-value of the experimental group was lower than 0.5. This meaningful figure was used to explain the learning effects in the experimental group. As a result, character education lessons by using film in the classroom helps to arouse students' interest and motivations. It offers lots

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of opportunities to have vicarious cultural experiences for students in various situations, so they could remember the contents they learned for a long time. Using films in the classroom even promotes character ability.

Character education lessons by using films

1. Select of appropriate film in character education

1. Movie scenes are motivated enough to give must be the proper stimulation
2. The subject is supposed to be a realistic and reliable and should be touched if possible.
3. The length of the film it is advisable for 25 minutes and, if possible, be divided into three parts: 8 minutes apiece.
4. Learners should be able to attract the attention and interest of.
5. The film must be appropriate to the level of the learner experience film.

2. Used films

1. Charlie and the Chocolate Factory, 2005.
2. Billy Elliot, 2000.
3. Fly away home, 1996.
4. Click, 2006.
5. Source Code, 2011.
6. August Rush, 2007.

3. Examples of the use of the film at the classroom

1. 1CD 14: 20 - 20: 07 Powerful remote control.
A wise person is someone who knows the value of time.
2. 2CD 32: 38-38: 24 The son of the marriage, wife's remarriage and heart attack.
The memory will be lost in time.
3. 2CD 38: 25-44: 26 The importance of family.
You should not miss the priority of time.

4. The film episode and lessons plans in film "Click"

Table 1. The movie episode and lessons plans in film "Click"

Episode	Title	Time(film+Lecture)	Content of film
1 (1CD 14: 20-20: 07)	A wise person	6min. + 8min.	Powerful remote control
2 (2CD 32: 38-38: 24)	Real happiness	6min. + 8min.	The son of the marriage & heart attack
3 (2CD 38: 25-44: 26)	The priority	6min. + 8min	The importance of family

Survey results

1. Lecture only

This question is like this, "When you heard the lecture without the film in your character education lessons, what about your satisfaction?"

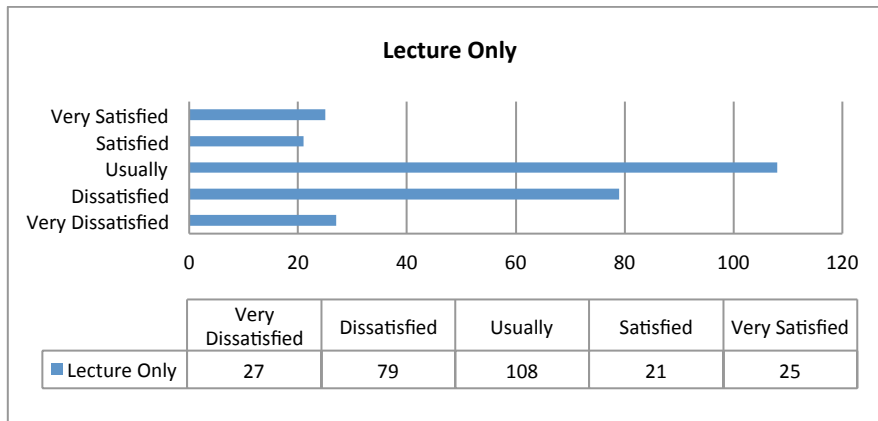


Fig. 1. Students satisfaction(Lecture only without film)

.2. PPT & Lecture only

This question is like this, “When you heard the lecture with PPT without the film in your character education lessons, what about your satisfaction?” The result is as follows.

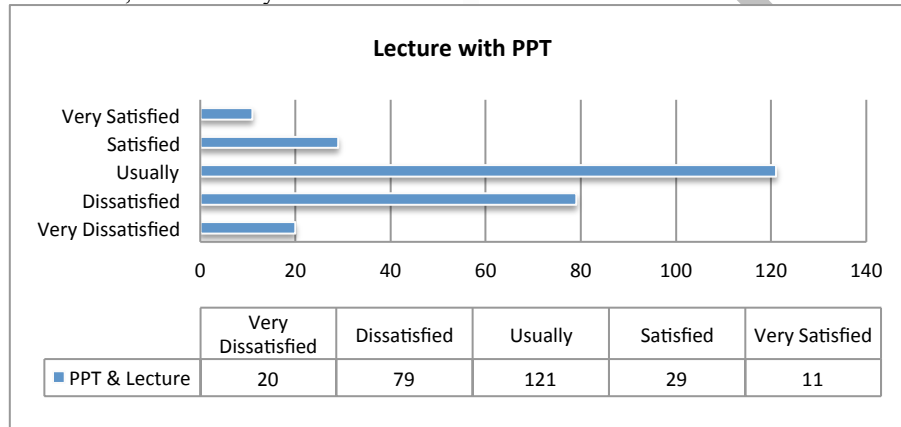


Fig. 2. Students satisfaction(Lecture with PPT without film)

.3. Film only

This question is like this, “When you see only film without interpretation in your character education lessons, what about your satisfaction?” The result is as follows.

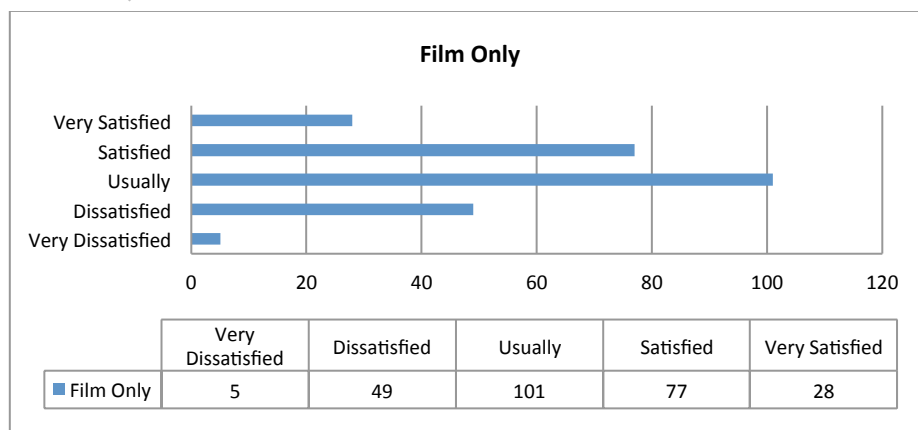


Fig. 3. Students satisfaction(Film only without Interpretation)

.4. Film & Lecture

This question is like this, “When you heard the lecture with film in your character education lessons, what about your satisfaction?” The result is as follows.

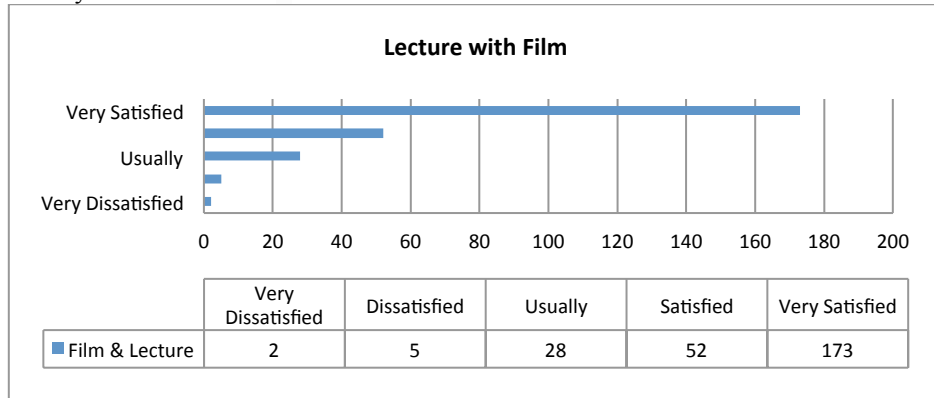


Fig. 4. Students satisfaction(Lecture with film)

.5. Needs of students

This question is like this, “What is the most important things in your character education lessons by using film?”. The result is as follows.

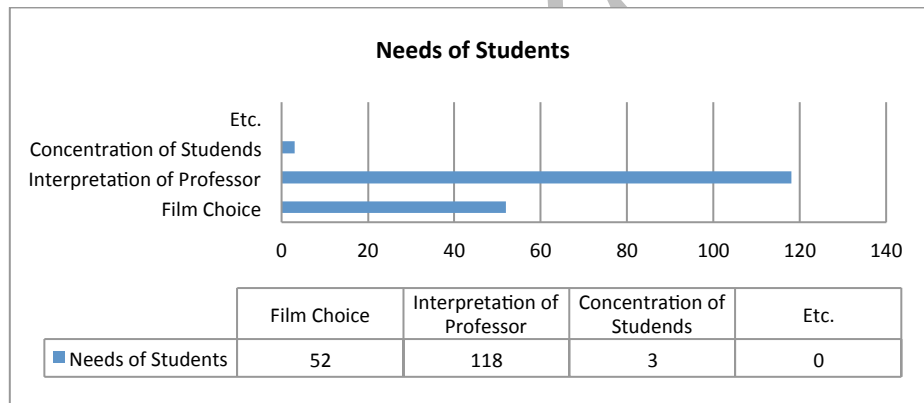


Fig. 5. Needs of Students

Conclusion

In conclusion, Importance of using multimedia materials like films should be emphasized in the class room. Because it can develop equally the various character ability and improve communicative competence of Korean University students.

First of all, the character education lessons by using film have to give a big help to improve the concentration of the students improve education classes are giving big help. Character education lessons by using the film are to stimulate students ' motivation into active and aggressive they were guided lessons.

Secondly, the best satisfaction of the students in their character education lessons, when they are heard together lecture and film. This is to imply that the interpretation of film is more important rather than film or lecture only.

Thirdly, we should be more widely to develop teaching methods by using film to improve character ability of students because that the efficiency for character education by using film was proved.

A Study on the Relationship between Turkish Consciousness Levels and Learning Skills of Teacher Candidates

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Abstract

The aim of this research is to study the relationship between Turkish consciousness levels and self-regulating learning skills. In this study, relational survey method has been used. Turkish Consciousness Scale (TCS) developed by Yaman (2011) and Self-regulatory Learning Skills (SRLS) Scale developed by Turan (2009) has been used to collect data. The sample of the research consists of 272 teacher candidates from Turkish, science, social studies, elementary school, math teaching, and psychological counseling-guidance departments. The data were analyzed through SPSS 16.0 program, ANOVA, t-test and Pearson correlation coefficient techniques. At the end of the study, a meaningful significance in a positive way has been found between the two scales. The total scores of TCS, considering the gender issue, has a positive difference for the females, has a difference for the Turkish teaching, considering the departments. The total scores of SRLS Scale, has a difference for the females, considering the gender issue, has a difference for psychological counseling-guidance, considering department issue.

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Peer-review under responsibility of the Sakarya University.

Keywords: Turkish Consciousness, Learning Skills, Teacher Candidates.

Introduction

Human being has been inherently communicating with the people around him in various ways since he began to exist. While this communication is more likely to include natural and instinctive reactions, it turns out to be coherent and meaningful activities in time. A successful communication in every field of life affects a person's life both socially and psychologically in a positive way. Main building block of communication is the addressee's ability to correctly perceive and make sense of the message that the addresser forms with codes. For this reason, it is possible to claim that understanding others and expressing oneself as being elements of communication are continuation of one another. At the same time, both listening and reading as receptive skills can be said to be data storage skills that form a source for speaking and writing as productive skills (Demir, 2010).

Language is a communication tool. However, it is a means of a sophisticated and very strong system; not simple. It is a social institution that praises and honors human being, and gives him prestige. People express and share their intelligence, emotions and opinions via language (Sağır, 2002). The process and structural organization of mother tongue that a person first acquires in the environment where his family members live and then improves in other environments; and that forms the strongest link between him and the society is the main source which directs an individual's intellectual life, in other words it is the most important thing for Gartner an individual to develop his thinking ability. It is possible for one to think clearly, perceive what is going on around and come up with new ideas on those if he understands this organization well (Ergenç, 1994). Mother tongue can be taught by developing understanding and expression skills. Understanding includes reading and listening; expressing oneself includes writing and speaking. Individuals who have not developed their language skills may not communicate with other people in the society well, because these people cannot express their opinions clearly and correctly, just as they cannot understand what they are told clearly and correctly. A student, who

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gains competence in his mother tongue, develops his interpretation skills and identity by perceiving his national and universal cultural background, gains sensitivity to emotion and admiration will succeed in his other lessons to a great extent (Sever, 2004). If students comprehend what they read and apply higher level cognitive processes since the very beginning of their educational life, then the efficiency of the education will be higher. As the importance of learning how to read and write is extremely high in teaching-learning process, learning occurring at this stage increases the students' dependence on their strength of comprehension. Especially in teaching environments where materials other than course books are rarely used, comprehension of reading parts can turn out to be the main way to learn. In this sense, students who have high level of comprehension can easily learn while the ones with lower level of comprehension have difficulties in learning (Şahin, 2011).

As Bloom (1979, quoted by Temizkan & Sallabaş, 2009) states, there is a strong relationship between the students' reading comprehension level and their academic achievement. Reading is also one of the most effective ways to create, transfer and inherit contemporary civilization values from generation to generation. That is why; we should train students so that they know reading as a life habit is of high important for their lives and train them to be inclined to read (Temizkan & Sallabaş, 2009). Reading comprehension is one of the main language skills which includes making sense of a written material and comprehending details and should be taught students since elementary school education (Rose et al., 2000, quoted by Demirel & Epçaçan, 2012). "Conscious" is defined as 'all the psychological activities or situations of the society a person lives in' in Big Turkish Dictionary (2009, quoted by Yaman, 2011). Language consciousness can be defined as 'an individual's sensitivity to the common language that is spoken in the society he lives in'.

Learning based on self-regulation which is taken as a main factor affecting student's success, is conceptualized in literature on the basis of Social Cognitive Theory. Self-regulation, in short, is defined as student's managing his motivation, cognition and behaviors so as to reach his goals (Garavalia & Gredler, 2002, quoted by Buluş, Duru, Balkıs & Duru, 2011). The ones who learn on the basis of self-regulation are aware of the level of their knowledge, their goals are set beforehand and they are planned for these plans; they set realistic goals to increase their acquirements, make use of materials around, handle with subjects and tasks with self-confidence and realistic self-evaluation (Buluş et al., 2011).

The Aim of the Research

The aim of this research is to study the relationship between Turkish consciousness levels and self-regulating learning skills of teacher candidates. The problem statement: Is there a significant connection between Turkish consciousness levels and their self-regulated learning skills of teacher candidates?

Sub problems: 1. What are teacher candidates' Turkish consciousness levels? How do teacher candidates' study approaches vary according to the varieties of gender, department, and graduated secondary school? 2. What are teacher candidates' self-regulated learning skills? How do teacher candidates' study approaches vary according to the varieties of gender, department, and graduated secondary school? 3. Is there a connection between Turkish consciousness levels and their self-regulated learning skills of teacher candidates?

Methods of the Research

In this study, quantitative research method and relational screening model has been used.

1. Sample of the Research

The population of this study is formed by 272 teacher candidates from departments of Turkish, Science, social studies, elementary school, mathematics, psychological counseling-guidance education at Education Faculty. 38 of Students (14.0%) are from the department of Turkish, 47 of them (17.3%) are from the department of Science, of 47 them (17.3%) are from the department of social studies, of 50 them (18.4%) are from the department of elementary school, of 36 them (13.2%) are from the department of mathematics and of 54 them (19.9%) are from the department of psychological counseling-guidance education, 169 of students (62.1%) are female and 103 of them (37.9%) are male.

2. Data Collection Instruments

Turkish Consciousness Scale (TCS): In this study, Turkish Consciousness Scale, which is developed by Yaman (2011) and is defined to be valid and reliable, was used. So as to prove the validity of this scale, in addition, Cronbach Alpha coefficient in relation to the internal validity of the scale was calculated by the researcher and it was found to be 0,89. Turkish Consciousness Scale has 17 items of affirmative sentences which

are listed under 3 elements as ‘individual use’ (1,4,6,9,11,13,14,16), ‘the importance of national unity’ (2,5,7,12) and ‘correct use of mass communication tools’ (3,8,10,15,17). The highest grade a person can get from Turkish Consciousness Scale which is prepared in the form of 5 level likert scale is 85, and the lowest grade is 17. High grade means high level of consciousness in Turkish.

Self-regulated Learning skills Scale (SRLSS): Self-regulating Learning Skills Scale (SRLSS); developed by Turan (2009) to determine university students’ self-regulated learning skills was used as the data collection tool. The response range of the scale is from “definitely disagree” (1), “disagree” (2), “uncertain” (3), “agree” (4) to “completely agree” (5). The minimum and the maximum score that can be taken from the scale are between 41-205. Five-point Likert type scale includes 41 items and four subscales named “motivation and acting for learning” (7 items), “planning and determining aims” (8 items), “strategy using and assessment” (19 items), and “lack of self-directedness” (7 items). These subscales are in harmony with the theoretical framework of the study. Cronbach’s alpha reliability coefficients for the scale and four subscales were 0.91 and 0.88, 0.91, 0.83, 0.76 respectively (Turan, 2009).

3.3. Analyzing Data

SPSS 16.00 is used to analyze the data. One-way ANOVA, independent t-test and Post-Hoc test techniques have been conducted to monitor the scores taken from the scales in terms of demographic varieties. PEARSON correlation coefficient analysis technique is applied in order to observe the relations between scales. In all statistical processes significance at a level of .05 has been sought.

Findings

The research findings are evaluated in the context of sub-problems.

Sub-Problem 1. What are teacher candidates’ Turkish consciousness levels? How do teacher candidates’ study approaches vary according to the varieties of gender, department, and graduated secondary school?

The minimum and the maximum score that can be taken from the TCS are between 17-85. In this study, the taken total TCS score was calculated as 57.7169 (Table 1).

Table 1. Distribution of scores of students taken from TCS and factors.

TCS and Factors	X	SD	SE
Individual Usage	25.4853	.41035	6.76761
The Importance of Unity of The Country	16.1691	.23014	3.79562
Correct Usage of Turkish in Mass Media	16.0625	.27251	4.49433
Total	57.7169	.83772	13.81603

As in table 2. as a result of independent group t-test applied to define whether the scores taken from the TCS and factors differentiate according to the gender variable; for the TCS total score and factor scores the difference between the arithmetic average of the groups have been found statistically significant; Female students’ score average is significantly higher than the Male students ($p < .05$).

Table 2. The results of Independent group t-test of the scores taken from TCS and factors according to the gender variable of students.

TCS and Factors	Group	N	X	SD	SE	t test		
						t	df	p
Individual Usage	Female	169	26.7456	6.51558	.50120	4.044	270	.000
	Male	103	23.4175	6.69434	.65961			
The Importance of Unity of The Country	Female	169	17.0533	3.21688	.24745	4.825	173.792	.000
	Male	103	14.7184	4.22044	.41585			
Correct Usage of Turkish in Mass Media	Female	169	16.7456	4.07815	.31370	3.123	185.477	.002
	Male	103	14.9417	4.92259	.48504			
Total	Female	169	60.5444	12.70169	.97705	4.472	270	.000
	Male	103	53.0777	14.36819	1.41574			

As seen in table 3 as a result of ANOVA which is done in order to determine whether the TCS and factors show a significant difference according to the department variable; for the TCS total score, Individual Usage factor score, The Importance of Unity of The Country factor score and Correct Usage of Turkish in Mass Media factor score the difference between the arithmetic averages of the group has been found statistically significant.

Following this process Post-Hoc analysis techniques are started to be applied.

After ANOVA; to determine how changed in TCS total score, Individual Usage factor score, The Importance of Unity of The Country factor score and Correct Usage of Turkish in Mass Media among sub-groups considering the department variable. LSD test has been chosen from among the post-hoc analysis techniques; because of TCS total score and Correct Usage of Turkish in Mass Media factor group variance are homogeny according to the Levene's test ($L=2.088$, $L=.747$ $p>.05$). Tamhane test has been chosen from among the post-hoc analysis techniques; because of Individual Usage factor score and The Importance of Unity of The Country factor group variance are not homogeny according to the Levene's test ($L=5.607$, $L=2.414$ $p<.05$). As a result of this test it has been stated that Turkish education students' score is significantly higher than other department students' score. Science and Elementary School education students' score is significantly higher than Psychological Counseling-Guidance and Social Studies education students' score for the TCS total score. Turkish education students' score is significantly higher than Elementary School, Social Studies, Mathematics and Psychological Counseling-Guidance education students' scores. Science education students' score is significantly higher than Mathematics, Psychological Counseling-Guidance and Social Studies education students' score. Elementary School education students' score is significantly higher than Psychological Counseling-Guidance and Social Studies education students' score for the Individual Usage factor score. Turkish education students' score is significantly higher than Science, Social Studies and Psychological Counseling-Guidance education students' scores for the Importance of Unity of The Country factor score. Turkish education students' score is significantly higher than Social Studies, Mathematics and Psychological Counseling-Guidance education students' scores. Science and Elementary School education students' score is significantly higher than Psychological Counseling-Guidance education students' score for Correct Usage of Turkish in Mass Media factor score.

Table 3. The results of ANOVA applied to define whether the scores taken from TCS and factors differentiate according to the department variable of students.

TCS and Factors	N, X and SD Values				ANOVA Results					
	Group	N	X	SD	Var. K.	SS	df	MS	F	p
Individual Usage	Turkish	38	29.6053	6.20174	Between	21.898	5	4.380		
	Science	47	27.1915	6.91765	Within	172.038	266	.647		
	Elementary School	50	26.3400	6.01227	Total	193.937	271			
	Social Studies	47	23.3617	6.77728					6.772	.000
	Mathematics	36	23.9444	5.84047						
	Psychological Counseling-Guidance	54	23.1852	6.59924						
	Total	272	25.4853	6.76761						
The Importance of Unity of The Country	Turkish	38	18.1842	2.25239	Between	22.227	5	4.445		
	Science	47	16.2979	3.34868	Within	221.787	266	.834		
	Elementary School	50	16.8600	3.64781	Total	244.014	271			
	Social Studies	47	15.3617	4.48391					5.332	.000
	Mathematics	36	16.4167	2.95079						
	Psychological Counseling-Guidance	54	14.5370	4.26355						
	Total	272	16.1691	3.79562						
Correct Usage of Turkish in Mass Media	Turkish	38	18.8158	3.70431	Between	30.012	5	6.002		
	Science	47	17.1277	4.09993	Within	188.945	266	.710		
	Elementary School	50	17.0200	3.75521	Total	218.958	271			
	Social Studies	47	14.5319	4.77243					8.450	.000
	Mathematics	36	15.6389	3.66569						
	Psychological Counseling-Guidance	54	13.9259	4.82467						
	Total	272	16.0625	4.49433						
Total	Turkish	38	66.6053	11.37693	Between	23.326	5	4.665		
	Science	47	60.6170	12.34566	Within	155.668	266	.585		
	Elementary School	50	60.2200	12.07340	Total	178.994	271			
	Social Studies	47	53.2553	14.81255					7.972	.000
	Mathematics	36	56.0000	11.40676						
	Psychological Counseling-Guidance	54	51.6481	14.66501						
	Total	272	58.8888	13.11111						

Guidance			
Total	272	57.7169	13.81603

As a result of ANOVA which is done in order to determine whether the scores taken from the TCS and factors show a significant difference according to the graduated secondary school variable; for both scale and factors scores the difference between the arithmetic average of the group has been found to be insignificant statistically.

Sub-Problem 2. What are teacher candidates' learning skills? How do teacher candidates' study approaches vary according to the varieties of gender, department, and graduated secondary school?

The minimum and the maximum score that can be taken from the SRLSS are between 41-205. In this study, the taken total SRLSS score was calculated as 157.7206 (Table 4).

Table 4. Distribution of scores of students taken from SRLSS and factors.

SRLSS and Factors	X	SD	SE
Motivation and action to learning	28.4706	.21444	3.53672
Planning and determining aims	31.7096	.30036	4.95368
Strategy using and assessment	73.8603	.56766	9.36207
Lack of self-directedness	23.6801	.31515	1.07392
Total	157.7206	5.19763	17.71158

As in table 5, as a result of independent group T-test applied to define whether the scores taken from the SRLSS and factors differentiate according to the gender variable; for the SRLSS total score, Planning and determining aims factor score and Lack of self-directedness factor score the difference between the arithmetic average of the groups have been found statistically significant. Female students' score average is significantly higher than the Male students ($p < .05$).

Table 5. The results of Independent group t-test of the scores taken from SRLSS and factors according to the gender variable of students.

SRLSS and Factors	Group	N	X	SD	SE	t-test		
						t	df	p
Motivation and action to learning	Female	169	28.5266	3.30416	.25417	.334	270	.738
	Male	103	28.3786	3.90353	.38463			
Planning and determining aims	Female	169	32.1893	4.87824	.37525	2.058	270	.041
	Male	103	30.9223	4.99939	.49260			
Strategy using and assessment	Female	169	74.6923	9.15345	.70411	1.886	270	.060
	Male	103	72.4951	9.58335	.94428			
Lack of self-directedness	Female	169	24.7988	4.69115	.36086	4.548	190.340	.000
	Male	103	21.8447	5.48216	.54017			
Total	Female	169	160.2071	17.40138	1.33857	3.010	270	.003
	Male	103	153.6408	17.54035	1.72830			

As a result of ANOVA which is done in order to determine whether the SRLSS and factors show a significant difference according to the department variable; for the SRLSS total score, Strategy using and assessment factor score and Lack of self-directedness factor score the difference between the arithmetic average of the group has been found statistically significant. Following this process Post-Hoc analysis techniques are started to be applied. After ANOVA; to determine how changed in SRLSS total score, Strategy using and assessment factor score and Lack of self-directedness factor score among sub-groups, considering the department variable, Tamhane test has been chosen from among the post-hoc analysis techniques; because of SRLSS and Strategy using and assessment factor group variance are not homogeny according to the Levene's test ($L=2.806$, $L=2.249$, $p < .05$). LSD test has been chosen from among the post-hoc analysis techniques; because of Lack of self-directedness factor group variance are homogeny according to the Levene's test ($L=1.089$, $p > .05$). As a result of this test it has been stated that, Psychological Counseling-Guidance education students' score is significantly higher than Elementary School education students' score for the SRLSS. Social Studies education students' score is significantly higher than Elementary School education students' score for the Strategy using and assessment factor. Turkish education and Psychological Counseling-Guidance education students' scores are significantly higher than Elementary School education students' score for the Lack of self-directedness factor.

As a result of ANOVA which is done in order to determine whether the scores taken from the SRLSS and factors show a significant difference according to the graduated secondary school variable; for both scale and

factors scores the difference between the arithmetic average of the group has been found to be insignificant statistically.

Sub-Problem 3. Is there a connection between Turkish consciousness levels and their self-regulated learning skills of teacher candidates?

Table 6. Pearson Çarpım Moment Korelasyon analizi sonuçları Pearson Multiplication Momentum Correlation Analysis Results conducted to define relations of the TCS and SRLSS

SRLSS and Factors	TCS and Factors			TCS Total
	Individual Usage	The Importance of Unity of The Country	Correct Usage of Turkish in Mass Media	
Motivation and action to learning	$r=.271(**)$	$r=.191(**)$	$r=.216(**)$	$r=.255(**)$
Planning and determining aims	$r=.236(**)$	$r=.208(**)$	$r=.182(**)$	$r=.232(**)$
Strategy using and assessment	$r=.248(**)$	$r=.262(**)$	$r=.196(**)$	$r=.258(**)$
Lack of self-directedness	$r=.177(**)$	$r=.126(*)$	$r=.109$	$r=.157(**)$
SRLSS Total	$r=.303(**)$	$r=.272(**)$	$r=.230(**)$	$r=.298(**)$

As a result of Pearson Multiplication Momentum Correlation Analysis. conducted to define the relations between the scales and factors; TCS, Individual Usage, The Importance of Unity of The Country factor score and SRLS scale score, Motivation and action to learning, Planning and determining aims, Strategy using and assessment, Lack of self-directedness factor scores have a significant positive relation while TCS Correct Usage of Turkish in Mass Media factor score and SRLS scale, Motivation and action to learning, Planning and determining aims, Strategy using and assessment have a significant positive relation (Table 6).

Results

Among the teacher candidates who took part in our study it has been found that female students' average points were notably higher than those male ones' in terms of consciousness level, for the total points of all the scale, Turkish language teaching department students' points are dramatically higher than the students of other departments, the points of the students at science and elementary school teaching departments are dramatically higher than the students' at social studies teaching and psychological counseling- guidance departments; and that there has been found no statistical relation between Turkish consciousness levels, the points gathered from the factors and the types of high school the students graduated from. In our study, it has been found that Turkish language teaching department students' points are higher than the students of other departments. However, expressing one's ideas correctly is necessary for all the other departments. Activities such as reporting an experiment in written form in Science lesson, writing any kind of assignment and summary in Social studies lesson, analyzing a problem in written form in Mathematics lesson prove that writing skill should be used in every lesson (Temizkan, 2009). Written expression skills, especially, form the basis for the success in other lessons. Failure and disorder in written skills usually cause problems in other lessons, too. That is why, all students must be taught writing skills at a basic level at least (Temizkan & Sallabaş, 2009).

In our study, it has been found that female students' average points were notably higher than those male ones' in terms of self-regulated learning skills and that the points of the students at psychological counseling- guidance department are notably higher than the students' at elementary school teaching department for the total points of all the scale. For the points of strategy use and assessment factor, students at social studies teaching department got higher points than those from elementary school teaching department. It has been seen that students of psychological counseling- guidance and Turkish language teaching departments got higher points than the ones from elementary school teaching department for the factor point of lack of self-directedness; and that there has been found no statistical relation between the points gathered from self-regulated learning skills scale and the types of high school the students graduated from.

In totals and factors of Turkish consciousness level scale and Self-regulated learning skills scale; there is found to be a meaningful positive relationship between the scales of Turkish consciousness level, Self-use, Importance for national unity and the scales of Self-regulated learning skills, Motivation and acting for learning, Planning and determining aims, strategy using and assessment, lack of self-directedness factors. What is more, there is found to be a meaningful positive relationship between the scales of Turkish consciousness level, correct use of mass communication tools and the scales of Self-regulated learning skills, Motivation and acting for learning, Planning and determining aims, strategy using and assessment factors.

According to the results of Doğan, Atmaca & Aslan Yolcu's studies (2012), it is necessary to handle students' learning approaches and their assessment choices altogether while forming the teaching process; because their consciousness like Turkish consciousness can be raised along with learning skills. In Çetinkaya's study (2011), Turkish language teacher candidates' critical thinking tendencies were found to be at low level. In this way, it is emphasized that there should be more activities which do not ignore the relationship between learning styles and Turkish consciousness level. Consequently, teacher candidates will be able to question their knowledge.

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A theoretical framework on open and distance learning

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Abstract

Many studies have been carried out targeting Open and Distance Learning (ODL) and related fields. Thanks to the rapid development in technology, which can be a common ground for many fields, interdisciplinary studies among various fields have gained importance resulting in integration of different concepts both into ODL and other fields. With this in mind the purpose of this study is to investigate the main domains of ODL by categorizing research terms and issues, which may lead to a theoretical framework. In this study ten peer-reviewed journals were selected to investigate. 584 research articles published in these journals from 2009 to 2014 have been analyzed and categorized. According to the study, technology, pedagogy, theory, policy, accessibility, design, environment and management domains emerged. Also articles were analyzed for TF-IDF scores according to years and n-grams were created. The study concludes that although there have been many new and ongoing studies in the field of ODL, the field of ODL has been growing needing novelties in research, theory and application of ODL.

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Peer-review under responsibility of the Sakarya University.

Keywords: ODL; theoretical framework; theory; research; application

Introduction

Open and Distance Learning (ODL) is relatively a new field with a historical background of nearly a hundred years. As Gunawardena & McIsaac (2003) states ODL has faced intense growth throughout the world since the early 1980s and with the effect of technological advancements, its shape has rapidly changed from early correspondence education, in which primarily print based materials were mailed to learners at a distance to a learning process that can be accessed from anywhere at any time. Although many research and studies have been conducted on ODL, there is still need to propose theoretical frameworks. One of the reasons for this might be the fact that theoretical framework is not something that can be found readily available in the literature and rapid change in technology. Another reason is the fact that ODL has a close connection with technology and rapid changes in technology result in a necessary revision of theories, interactions, roles and content delivery methods related to ODL. It's clear that ODL is a field which needs a continuing revision and renewal mostly due to its related dynamics like technology. As McLuhan (cited in Anderson and Tron, 2011) first argued, technologies have an influence on usage, its definition and the pedagogy that was supported in the learning and design.

Theoretical frameworks are expected to reflect an understanding of theories and concepts that are related to a specific topic or field. As Herek (1995) states theoretical framework has the following advantages for a field or study:

- An explicit statement of theoretical assumptions permits the reader to evaluate them critically.
- The theoretical framework connects the researcher to existing knowledge. Guided by a relevant theory, you are given a basis for your hypotheses and choice of research methods.
- Articulating the theoretical assumptions of a research study forces you to address questions of why and how. It permits you to move from simply describing a phenomenon observed to generalizing about various aspects of that phenomenon.
- Having a theory helps you to identify the limits to those generalizations. A theoretical framework specifies which key variables influence a phenomenon of interest. It alerts you to examine how those key variables might differ and under what circumstances.

With this in mind, the purpose of this study is to investigate the main domains of ODL by categorising research terms and issues, which may lead to a theoretical framework.

Historical Background of ODL

Historical background of ODL can be categorized under pedagogy, technology and theory; however, it won't be wrong to state that these categories have strong interventions among each other.

1. Pedagogical Background of ODL

According to Anderson and Dron (2011), historically ODL has gone through three pedagogical approaches: Cognitive-behaviourism, social-constructivism and connectivism. They state that Cognitive-Behaviorist (CB) models defined the first generation of individualized distance education. Besides enabling large numbers of learners to get education at lower costs than traditional education, it also provided a maximum access and student freedom (Daniel, as cited in Anderson and Dron, 2011).

Cognitive-behaviorism and social-constructivism theories claim that learning occurs inside a person. Even social constructivist views, which hold that learning is a socially enacted process, promote the principality of the individual in learning. Connectivist approach focuses on learning process as well as what has been learnt. At the present time, in which open and distance learning resources or environments have gained popularity, the quality of the information learnt and the importance of converting the information into knowledge process has made connectivist approach more important for ODL.

When we look at the Social-Constructivist Pedagogy of ODL, Anderson and Dron (2011) urges that there exists a link between two-way communication technologies and social-constructivist pedagogy. This pedagogy category heavily focuses on interactions in between and among participants rather than just transmitting information.

With the recent developments in ICT and their effects on education has resulted in collaboration and virtualization of social environments. In this context, social relations and collaborative learning heavily relies on networks. Whereas in social-constructivist learning theory, actualization of learning is fulfilled with individual comprehension in a social manner, in connectivist theory it is fulfilled through recognition and interpretation of the structures distributed within the technologically advanced networks. According to George Siemens(2005),

Connectivism is the integration of principles explored by chaos, network, and complexity and self-organization theories. Learning is a process that occurs within nebulous environments of shifting core elements – not entirely under the control of the individual. Learning (defined as actionable knowledge) can reside outside of ourselves (within an organization or a database), is focused on connecting specialized information sets, and the connections that enable us to learn more are more important than our current state of knowing.

According to Vygotsky (1978), behaviourist, constructivist and cognitive theories have been used for structuring and maintaining learning processes. These theories regard learning as an internal process whereas social-constructivist theory explains learning and cognitive development as a social and collaborative activity. In his study, Vygotsky (1978) mentions two development levels: actual and potential developments. Actual development means the level which the learner reaches already and potential development means the level of learning which can be reached through the guidance of tutors or peer collaboration and potential development level is the stage at which planned learning occurs. Another point is that for a cognitive structuring to occur during the learning process, collaboration with others is important. As Shunk (2000) states reciprocal teaching, peer collaboration, cognitive apprenticeships, problem-based instruction, webquests, anchored instruction and other methods that involve learning with others are included in social constructivist approaches.

To sum up, it wouldn't be wrong to liken the structure of connectivism to human body in a win-win context: There exists a communication network which surrounds the individual and as the individual's learning grows, this affects the organizations and institutions around the individual and as their learning grows, this leads to an expansion in individual's learning. As Siemens (2005) states this knowledge development cycle enables learners to stay updated "in their field through the connections they formed".

2. Technological Background of ODL

Garrison (1985) categorises technological evolution of ODL under three generations: Correspondence, Telecommunications and Computer. Likewise, Anderson and Dron (2011) made a similar categorisation: Mass media, Conferencing and Web 2.0. When we look at the common criteria of these categorisation we can see that the type of interaction (one-way or two-way) and role of the participants (active or passive) plays an important role. Furthermore, as Gunawardena & McIsaac (2003) states while analysing today's and future distance learning technologies, it is crucial to consider "integrated telecommunication systems rather than simply video versus audio, versus data systems".

.3. Theoretical Background of ODL

Keegan (cited in Simonson et. al., 1999) classified theories of distance education into three groups: theories of independence and autonomy, theories of industrialization of teaching, and theories of interaction and communication.

.3.1. Theory of Independence and Autonomy

Wedemeyer, who proposes the theory of independence and autonomy, highlights that the core of ODL is learner independency and thus a (Simonson et al. 2009). Emphasising the characteristics of independent study systems such as separation and time, the earlier definitions of ODL can be said to be built on this theory. As Gunawardena and McIsaac(2003) states Wedemeyer's vision of independent study was consistent with self-directed learning and self-regulation.

.3.2. Theory of Industrialization

Otto Peters' view of distance education was as an industrialised form of teaching and learning. He compared distance education with the industrial production of goods. He also claims that before the industrial age distance education couldn't have existed. From this aspect, Peters (1988) proposed a new terminology, which heavily highlights the concepts from industrialisation for the analysis of distance education: Rationalization, Division of Labor, Mechanization, Assembly Line, Mass Production, Preparatory Work, Planning, Organization, Scientific control methods, Formalization, Standardization, Change of Function, Objectification, Concentration and Centralization. As Simonson et al. (2006) states, division of labor is the key element of distance education and with the help of "mechanization" and "automation", teaching process in Peters' theory has been updated.

.3.3. Theory of Interaction and Communication

Borje Holmberg's theory of distance education, what he calls "guided didactic conversation", falls into the general category of communication theory (Schlosser & Simonson 2009, p.43). As Simonson et al. (2006) justifies, at first Holmberg proposed seven background assumptions and in 1995 these assumptions were extended. Accordingly, the theory consists of eight parts:

- 1.Distance education serves individual learners who cannot or do not want to make use of face-to-face teaching.
- 2.Distance education promotes students' freedom of choice and independence.
- 3.Society benefits from distance education.
- 4.Distance education is an instrument for recurrent and lifelong learning and for free access to learning opportunities and equity.
- 5.Distance education may inspire metacognitive approaches.
- 6.Distance education is based on deep learning as an individual activity
- 7.Distance education is open to behaviorist, cognitive, constructivist and other modes of learning.
- 8.Personal relations, study pleasure and empathy between students and those supporting them are central to learning in distance education.

All in all, Holmberg (1986) highlights that the dialogue between the learner and the teacher as the basic characteristic of distance education and states that guided conversation facilitates learning.

Methodology

What are the recent theoretical domains of Open and Distance Learning? was the main motive of the present study. With this question in mind, the present study is configured as a three-phase research: keyword search, categorization and content analysis.

Peer-reviewed journals in ERIC database were searched with the following key words: "distance education", "distance learning", "online learning" and "open and distance learning". The top ten journals, which include the highest number of publications in the field of distance education, were selected for the analysis. These journals are Distance Education, British Journal of Educational Technology, International Review of Research in Open and Distance Learning, Journal of Distance Education, Electronic Journal of e-Learning, Quarterly Review of Distance Education, American Journal of Distance Education, Journal of Asynchronous Learning Networks, Interactive Learning Environments, Open Learning: The Journal of Open, Distance and e-Learning. Since the purpose of this study is to identify the recent theoretical domains in ODL, the chosen journals are supposed to be qualified for the validity of the study. In these ten journals, 584 articles which were published between the years 2009 and 2014 and include ODL related research content are selected.

The key words and issues in the research questions of these article were analyzed and listed down in Google spreadsheet and were categorized under main themes. All the keywords were grouped under appropriate themes; however, sometimes some keywords had to be placed under different themes since they are difficult to be categorized under a certain theme.

Also using RapidMiner software, articles were analyzed. Using Tf-IDF analysis, key terms for each year were found.

Findings

The issues extracted from the research questions are put under the following main themes: Pedagogy, Theory, Research, Design, Policy, Technology, Environment, Learner and Teacher. The most intensive region of the node is found to be the pedagogy theme whereas the least intensive area of the node is found to be the research theme. Visual representations of connections were created and uploaded to website. The addresses are:

<http://goo.gl/eYoHWY>

<http://goo.gl/8ZnB9G>

<http://goo.gl/6sCR5f>

The term list calculated using tf-idf scores are shown in Table 1. The first 15 terms are given in order according to TF-IDF scores. In Wikipedia ("tf-idf," 2014) tf-idf is explained as:

Tf-idf, short for term frequency-inverse document frequency, is a numerical statistic that is intended to reflect how important a word is to a document in a collection or corpus. It is often used as a weighting factor in information retrieval and text mining. The tf-idf value increases proportionally to the number of times a word appears in the document, but is offset by the frequency of the word in the corpus, which helps to control for the fact that some words are generally more common than others.

Variations of the tf-idf weighting scheme are often used by search engines as a central tool in scoring and ranking a document's relevance given a user query. tf-idf can be successfully used for stop-words filtering in various subject fields including text summarization and classification.

Table 1. First 15 terms listed according to TF-IDF scores.

	2009	2010	2011	2012	2013	2014
1	learning	faculty	presence	learning	game	coursera
2	tutor	game	social_presence	students	mobile	dropout
3	residential	wiki	connectivism	mobile	educational_resources	blogs
4	learning_design	mobile	portfolio	online	presence	trade
5	medical	face-to-face	tutor	teachers	faculty	internet_self
6	immediacy	team	mobile	face-to-face	cognitive-load	cooperative
7	players	writing	cognitive_presence	instructor	teacher	deaf
8	reasoning	instructional_materials	satisfaction	presence	social_presence	interwise
9	retention	regulated_learning	language	facebook	blog	satisfaction
10	cscl	satisfaction	emergent	course	training	teachers
11	competencies	virtual	screen	tutors	twitter	identities
12	transactional	instructor	team	learner	textbooks	self_efficacy
13	blog	service	faculty	virtual	virtual	enrolment
14	campus	learning_system	competencies	language	instructor	habits_behaviours
15	adoption	self_regulated	synchronous	group	face-to-face	supervisor

During the analysis also n-grams were created. In the fields of computational linguistics and probability, an n-gram is a contiguous sequence of n items from a given sequence of text or speech. The items can be phonemes, syllables, letters, words or base pairs according to the application. The n-grams typically are collected from a text or speech corpus.

An n-gram of size 1 is referred to as a "unigram"; size 2 is a "bigram" (or, less commonly, a "digram"); size 3 is a "trigram". Larger sizes are sometimes referred to by the value of n, e.g., "four-gram", "five-gram", and so on. We have created bigrams. In Table 2, there are bigrams of selected terms. The Google Document containing TF-IDF words and n-grams list is shared. The address of the document is <http://goo.gl/AoqDbd>.

Table 2. Chosen n-grams

Learning	Presence	Satisfaction
1. learning_design	1. social_presence	1. student_satisfaction
2. blended_learning	2. cognitive_presence	2. satisfaction_levels
3. learning_system	3. teaching_presence	3. assessing_satisfaction

4. language_learning	4. presence_online	4. efficacy_satisfaction
5. learning_style	5. emotional_presence	5. satisfaction_synchronous
6. learning_resources	6. omnipresence	6. levels_satisfaction
7. asynchronous_learning	7. presence_concern	7. satisfaction_amount
8. interactive_learning	8. presence_concomitant	8. efficient_satisfactory
9. learning_networks	9. presence_confidence	9. participants_satisfaction
10. learning_environments	10. presence_creation	10. dissatisfaction
11. learning_groups	11. presence_impact	11. satisfaction_learning
12. collaborative_learning		12. satisfaction_online
13. active_learning		13. effective_satisfactory
14. online_learning		14. interactions_satisfaction
15. learning_experience		15. overall_satisfaction
16. group_learning		
17. learning_processes		
18. learning_content		
19. learning_activities		

In Fig.1, a model of ODL, can be seen.

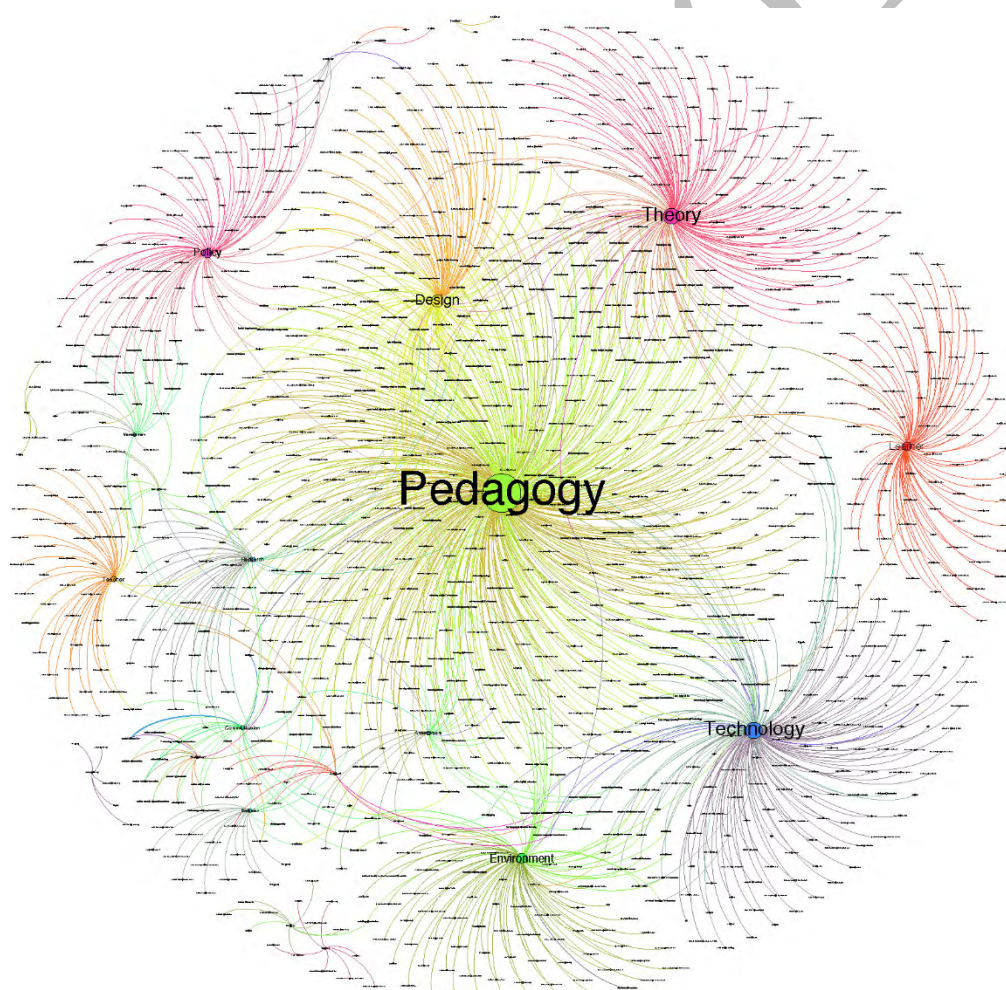


Figure 1. One of the created images of ODL.

Among the studied journals ‘Presence’ is a generally studied subject in 2010, 2012, and 2013 following an increasing trend. The subject generally studied in 2013. In our study we found these keywords and placed them under themes listed in Table 3.

Table 3. Presence

Keyword	Theme
emotional presence	Theory
instructor social presence	Teacher
learning presence	Theory
perceptions of social presence	Pedagogy
physical presence	Learner
presence	Theory/Pedagogy/Learner
teaching, social and cognitive presence	Pedagogy
virtual presence	Pedagogy

Among the studied journals ‘game’ is a generally studied subject in 2010, 2012, and 2013. The highest number of study on this subject was done in 2013. In our study we found these keywords and placed them under themes listed in Table 4.

Table 4. Game

Keyword	Theme
computer games	Technology
dialogue games	Theory/Technology
digital game-based learning	Technology/Theory
digital games	Technology/Theory
educational computer games	Pedagogy/Technology
educational game	Pedagogy/Design
educational simulation games	Pedagogy/Technology
game based learning	Theory
game-based course	Design
game-like learning systems	Technology
massively multiplayer online games	Environment/Technology
pre-algebra games	Environment
video game	Technology

Among the studied journals ‘game’ is a generally studied subject in 2010, 2011, 2012, and 2013. The highest number of study on this subject was done in 2013. There is an increasing trend in studies about mobile.

Table 5. Mobile

Keyword	Theme
mobile app design	Pedagogy
mobile augmented reality activity	Pedagogy/Design
mobile communication tools	Pedagogy/Technology
mobile device supported learning	Pedagogy/Design
mobile learning	Pedagogy/Design

Discussion and Conclusion

In the research articles between the years 2009 and 2014 in the field of ODL, learning, faculty, presence, game and coursera words have been found to have the highest TF-IDF scores, meaning that these words are more commonly used. Studying these researches and developments, while the trends between 2009 and 2012 show a similarity, as of 2012 there have been changes in the trends. Until 2012, whereas the scores of the theory and learning process related terms were higher, between 2012 and 2013 with the rise of some trends like social networks, MOOCs and gamification, game and coursera words constitute the top of the list. Considering the fact that approximately a nine-month time is required for an article to be published in a journal, it can be stated that starting from the beginning of 2012 there have been dramatic changes in ODL trends. Assuming that in educational research, firstly applications are understood then their educational foundations and theoretical

structures are studied, we can foresee that for the following years as well as MOOCs, mobile technologies, gamification, game based learning and social networks, theories related to them will emerge among the trends.

Though the TF-IDF scores between 2009 and 2014 have shown a difference, studies and research on face to face learning, presence, teacher and the learner, satisfaction, mobile and online learning have been conducted regularly. With the rise of connectivism and social networks, the studies carried out over wikis and blogs terms until 2011, have left their place to the terms facebook, game, mobile, twitter and coursera after 2012. Recently, high TF-IDF scores of the terms presence, cognitive load and dropout can be a proof that generally studies are done on the basis of connectivism. Having that said, besides being an important concept in the field of ODL in broader sense, presence is related with the activities of individuals during the distribution of knowledge. Another point is that cognitive load is related with information processing and in a connectivist structure information processing is fulfilled completely in self-structure. With the rise of MOOCs constructed on the basis of connectivism (cMOOCs), while studies on what the most preferred MOOC types are and how an effective MOOC can be designed are conducted, one of the seminal factors is the dropout rates. To sum up, it can be stated that connectivist approach exerts a great role in determining the latest trends in ODL. Considering the fact that connectivism first emerged in 2004, the reason why its effects on trends took 8-10 years can be explained by another fact that theories need some time to take root and in the field of education, theories result in radical changes on condition that appropriate technologies be used. Moreover, the rise in the score of habits and behaviors terms which haven't shown up on the top of ngrams has been an indication that with the changing learner and teacher roles, changes in habits and behaviours have been studied.

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Accommodation business management's attitudes towards employees received vocational tourism education

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Abstract

Despite the growing number of institutions which are giving tourism education at the level of high school or higher education, a lack of qualified employees has continued to be one of the main problems for the tourism industry in Turkey. According to researchers looking at former tourism students it is evident that after a while employees move away to other business sectors from that of tourism. The purpose of this research is putting forward the importance of employees who have had tourism education for the tourism industry. To this end, the hotel manager's perception of employees who had tourism education was specified. At the preparation of the research quantitative methods were used and in the data collection, survey methods were used. According to the research findings, hotel managers pointed out that, employees who had vocational tourism education had a positive contribution to the performance, profitability, productivity of businesses and customer satisfaction. Yet, another finding of the research, according to the hotel managers, is that the vocational education given is insufficient.

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Peer-review under responsibility of the Sakarya University.

Keywords: Tourism Education, Vocational Tourism Education, Tourism, Alanya

1. Introduction

In intense competition of the field, the destinations and management's, who wants to get a bigger share of the tourism market, requirements such as providing the quality services required by the modern tourism concept, the realization of customer expectations and satisfaction, and the ability to increase business efficiency and performance is highly due to vocational and technical education of the labor force employed in the sector. (Kızılırmak, 2000; Ünlüönen et al., 2010; Kusluvan and Kusluvan, 2000; Ünlüönen, 2000). In other words, tourism businesses, that is basic superstructure dynamics of the tourism industry, products' , that are in the market and open to sale, and labor-intensiveness of these products is directly related to the involved individuals in this process being the experts, i.e. qualified enough for the work. Businesses' success to provide continuity and loyalty of customers and profitability targeted as a result, the share of all employees working in the said business is quite significant. The contributions of the employees in this process, no doubt, are directly linked to the education of them (Avcıkurt et al., 2012). In this context, for the sector, tourism education is vital in order to provide a qualified workforce. Vocational tourism education is defined as the education of the labor force as the qualifications needed by the tourism sector (Güneş, 1997). Vocational tourism education programs has emerged to be able to follow current technology and trends in the tourism industry, to provide the growing demand services and the need for employees who can communicate well with customers, in a sustainable way (Amoah & Baum, 1997). In short, the basic purpose of vocational tourism education is to gain basic knowledge and professional skills that is needed in the area (Hacıoğlu et al., 2008).

Tourism businesses' ability to work efficiently is directly proportional to the quality of service (Amoah & Baum, 1997). Besides that fact that the quality of service is affecting the productivity, customer satisfaction, as well, is positively affected (Richardson, 2009; Kusluvan & Kusluvan, 2000). In order to provide quality services and to satisfy their customers, employees must be educated in the best educational institutions that reviews the field (Christou, 1999). Thus, skilled and qualified workforce is to be employed in these enterprises in tourism service will lead the increase in customer satisfaction and the quality of service (Christou, 1999; Baltacı et al. 2012). This employment of the employees have received vocational tourism education will provide maintenance of service quality and customer satisfaction (Kusluvan & Kusluvan, 2000). Increase in the number of employees with vocational education in businesses will provide advantage in competition for both destinations and businesses (Kusluvan & Kusluvan, 2000; Pfeiffer, 2005; Chang and Hsu, 2010; ÜNLÜÖNEN et al., 2010).

As the tourism sector consists of labor-intensive services, despite the fact that the success of the company is linked to industry-quality, well-educated and skilled employees (Amoah and Baum, 1997; Avcıkurt et al., 2012)

tourism industry seems to have difficulties both in finding skilled employees and in keeping their existing skilled employees in hand (Richardson, 2009). When studies related with vocational education in Turkey reviewed, it is seen that there are results that shows a negative trend for working in their profession from the students of vocational tourism education as well as the studies showing that it is seen that in a positive way.

Aksu and Köksal (2005) in their study, have been found the students of tourism's perspectives on the tourism sector work is business to be negative. Kusluvan and Kusluvan (2000) have received the result that only 42.5% of students in vocational tourism were identified themselves as they want to stay in the tourism sector. A similar result emerged in the study of Çatı and Bilgin which was done in 2013. Only 49.5% of students who received vocational tourism education are willing to work in the tourism sector. The students also noted that the lack of adequate employment opportunities in tourism sector. In a study made by Avcıkurt and his colleagues (2012), the views and current situation of students who graduated from University of Balıkesir Tourism Hotel Management School in the last 10 years was considered. Accordingly, only 30.6% of students who graduate from the department has been working in the tourism sector. On the contrary, Duman and colleagues (2006) examined that 68.5% of the students in the department see their future in the tourism sector in Mersin. Roney and Öztin (2007) 65.6% of students were found for willing to work in the tourism sector. According to studies of Avcı in Çeşme (2011), 77.9% of the students who have received vocational tourism education would like to work in the tourism industry. Kişioğlu and Çakırlı's (2012) study shows that the students consider to make a career in their profession. When studies in foreign countries are observed, it is seen that the students who has received vocational tourism education tend to work in the tourism sector more than in Turkey. In Chen and colleagues' studies (2000), 70.1% of students have received vocational education in tourism was determined that they want to stay in the sector and their attitude towards the sector is positive. Hjalager's study (2002) shows that 71% of students who participated in the study consider themselves still in the tourism sector after 10 years. According to Richardson's study (2009) based in Australia, more than 50% of the students participating in the study who receive vocational tourism education, unlike other studies, would like to work in other sectors outside the tourism sector. Another finding of the same study is that 43.6% of the students participating in the study were found not intended to work in tourism after graduation.

2. Management and Research Objectives

When the tourism literature is reviewed, it will be seen that there are a lot of studies made by tourism students in order to determine perceptions and attitudes towards tourism sector, tourism education, internships both national and international. But studies to determine the attitude of the business managers towards vocational tourism education and vocational tourism trained employees is not as common as other studies. The main objective of the research in this context is the determinations of attitudes of accommodation business managers towards employees have received vocational education. The context of the research is determined by department managers working in accommodation establishments in Alanya, certificated by Ministry of Tourism. Ministry of Tourism certificated 285 accommodation establishments in Alanya (ALTSO, 2013). But we did not find any statistical data on the number of managers working in the business in the region. Therefore, a general rule was applied as the more than 5 times the number of variables of the minimum number of observations. Generally accepted variable/observation ratio is at least 1/3 or 1/4 and 1/5 variable / observation rates are represented by the ideal dimensions (Nakip, 2003). This sample size of the study from the above rule is "5 x 31 = 155" respectively. Convenience sampling method which is not based on probability was used in this study. At the end of the study, data obtained from 203 managers working in 8 five-star, 18 four-star and 6 self-contained apartments and it is seen that the number detected data was bigger than the number of the sample size. Survey was conducted in April, 2014.

Literature scale related to the development of the subject was made (Amoah and Baum, 1997; Christou, 1999; Chen et al., 2000; Kusluvan the & Kusluvan, 2000; Duman et al., 2006; Roney and Öztin, 2007; Richardson, 2008; Richardson, 2009 ; Hunter, 2011; Axeman et al. 2012; Roof and Bilgin, 2013), literature results suggests a question pool consists of 45 and it was prepared. The propositions are presented for academics. As a result of examination of expert academics, some questions are not fully understood, and some other questions have been reached the conclusion that there was no direct relationship to the subject and the 14 propositions removed from scale. After examination of academics, the final scale was established as consisting of 31 propositions.

The data collected through the questionnaire was analyzed with the statistical package program. The interpretation of data on demographic variables was used for analysis of frequencies and percentages. Propositions of the scale were subjected to factor analysis to determine the dimensions of attitudes of accommodation managers of enterprises towards tourism education objectives. A nominal t-test and ANOVA were applied to the managers by accommodation businesses to determine whether they differ in attitudes towards vocational tourism education through their demographic characteristics.

3. Research Analysis and Results

The findings obtained by statistical analysis were examined under three headings. First, the managers of businesses surveyed have also been given accommodation demographic findings. Later, dimensions that form accommodation establishments' managers' attitudes towards vocational tourism education are described. Finally, tourism accommodation business managers attitude towards vocational education were analyzed according to demographic change.

3.1. Demographic Results

Findings related to the demographic variables were presented as percentages and frequency distributions in Table 1 below.

Table 1: Demographic Results

Sex	The	%	Department	n	%
Woman	68	33,5	Food and Beverage	47	23,2
Male	135	66,5	Front Desk	40	19,7
Education	The	%	Housekeeping	35	17,2
Primary education	37	18,2	General manager	33	16,3
High school	67	33,0	Accounting	13	6,4
Associate	38	18,7	Other *	35	17,2
Bachelor's degree	61	30,0			
Age	The	%	Worked Hotel Type	The	%
18-25 years	15	7,4	5 Stars Hotels	83	40,9
26-32 years	55	27,1	4 Stars Hotel	86	42,4
33-40 years	69	34,0	Apart Hotel	34	16,7
41-48 years	46	22,7	Working Time at the hotel where	The	%
49-55 years	16	7,9	0-1 years	43	21,2
56 years and over	2	1,0	2-5 years	72	35,5
Tourism Education Receive Status	The	%	6-9 years	49	24,1
Yes	112	55,2	10 years and over	38	18,7
No	91	44,8	Empty	1	5

* Business Owner, Business Partner, Human Resources, Sales and Marketing, Purchasing, Entertainment, Public Relations

33.5% (68 people) of the managers that research covered in accommodation establishments were female managers, and 66.5% (135 persons) of them were male managers. When it is analyzed according to age, it is seen that the majority of the managers were from young or middle age groups. 7.4% of managers (15 people) from 18-25 age group, the 27.1% (55 people) from 26-32 age group, 34% (69 people) from 33-40 age group, 22.7% (46 people) from 41-48 age group and 8.9% (18 people) were from 49 and over age group. 68.5% of managers surveyed appear to consist of 18-40 age group. When analyzed according to their level of education is that understood 48.7% of them were university graduates. The proportion of primary school graduates were 18.2% managers, while the proportion of high school graduates were 33% of managers. 76.4% of managers within the scope of the study (food and beverage, front office department, housekeeping department and general manager) seem to create four sections. Food and beverage department has the 23.2% of managers, front office managers has 19.7%, housekeeping department has 17.2%, while general manager are 16.3% of them. 6.4% of them were accounting department managers and other department managers and constitute business owners and partners were 17.2% (such as human resources, sales and marketing, purchasing, animation, public relations). When it comes to the type of hotel they work, in terms of the manager's, 42.4% in a four star hotel, 40.9% in a five star hotel and of 16.7% in an executive apartments type. In terms of working experience in the same companies, 56.7% of the managers spend less than five years while they work. The proportion of managers working in the same institutions were for 0-1 years 22.2%, while the proportion of working executives in business over ten years and they appear to be 18.7%. According to the literature review results (Tuna, 2007; Tütüncü and Demir 2002; Ehtiyar and Üngüren that, 2008; Yanardağ and Avcı, 2012; Tüzün, 2013), it is seen that the one of the major problems of tourism is high staff turnover rate. When discussed in terms of tourism accommodation business managers education, it is seen that 55.2% of them was received a high school or university degree of vocational tourism while 44.8% of them wasn't received any tourism education.

3.2. Dimensions of the Hospitality Industry Leaders Attitudes Toward Vocational Tourism Education

Managers of accommodation companies participating in the study were subjected to factor analysis of 31

propositions in order to determine the elements that are forming their attitudes towards vocational tourism education. As a result of factor analysis applied on the 31 propositions on the scale, 5 factors (elements) were determined. Table 2 shows the results 5 factors obtained from factor analysis and eigenvalues and ratios indicating the variance of each item of the scale factor with factor values and the load which it is associated are shown. In addition, the overall reliability of scale is given with coefficients of the each factor's reliability.

Table 2. Factor Analysis

Factors	1	2	3	4	5
Eigenvalues	9,169	2,013	1,603	1,531	1,333
Explained Rate Variance %	36,675	8,051	6,413	6,125	5,331
Reliability Coefficients of the Factors (Cronbach's Alpha)	, 898	, 699	, 842	, 796	, 535
Factor 1: Performance and Efficiency					
• Employees have received vocational tourism education are more likely to team work.	, 740				
• Communication skills of employees who have received vocational tourism education are high.	700				
• Working with tourism employees has received vocational tourism education raises the profitability.	, 693				
• Employees have received education to work with the tourism increases productivity.	, 692				
• Employees have received vocational tourism education depends more on the job.	, 685				
• Working with professional tourism employees lightens my workload.	, 677				
• Working with employees who have received vocational tourism education jobs are made much easier.	, 666				
• Employees who have received vocational tourism education is to bring about a difference in comparison to other employees.	, 641				
• Working with employees who have taken vocational tourism education reduces customer complaints.	, 638				
• Employees have received vocational tourism education are more proper in their job.					
• Employees have received vocational tourism education solve problems easier.	620				
Factor 2: Customer Relations					
• Vocational tourism educated employees more effectively fulfill the expectations of the customers.		, 772			
• Customer relationships of the employees who receive vocational tourism education are stronger.		, 754			
• Vocational tourism education employees offer better quality of service.		, 743			
• Employees have received vocational education in tourism is to communicate better with customers.		, 643			
• Vocational tourism educated employees increase customer satisfaction.		431			
Factor 3: Employment Preferences and Priorities					
• Vocational tourism educated employees more preferable compared to other employees.			808		
• Vocational tourism educated employees I would like to employ more.			, 774		
• Vocational tourism educated employees have priority in recruitment.			, 741		
• Vocational education positively affects employees' careers.			, 711		
Factor 4: Professional Knowledge and Skills					
• Professional knowledge of the employees who have received vocational tourism education is sufficient.				, 803	
• Quality of education of employees satisfies the sector needs.				, 797	

Factor analysis was performed using Varimax rotation axis. Eigenvalues statistics was used in the calculation of the factors. During research, while determining the load of the substance (variable) is considered as at least 0.35 and the highest value compared to other factors is considered. According to the results of first applied factor analysis, the first five propositions' common variance (*communality*) value was found under 0.50 and factor analysis was applied to the 26 propositions again after these five propositions being extracted from scale. At the end of the application of factor analysis on twenty-six propositions, the 5 factors (size) were determined. KMO (Kaiser-Meyer-Olkin) test is also applied. KMO (Kaiser-Meyer-Olkin Measure of Sampling Adequacy) is the value of the factor analysis showing the condition to apply to the research data. Bartlett's Test of Sphericity derives a value that shows whether it can be obtained significant factors or variables from the research data.

As a result of the applied factor analysis, KMO (Kaiser-Meyer-Olkin Measure of Sampling adequacy) value was calculated as 0.892 which is a satisfactory level. The degree of sphericity which shows significant factors or variables can be derived from research data (Bartlett's Test of Sphericity) calculated as 2215.583 and the values obtained were found to be statistically significant at the 0.000 level. Findings obtained at the two tests a show that of the studied sample's size is sufficient and the data is appropriate to be able to make the factor analysis.

For the reliability study of the scale, "Cronbach Alpha" internal consistency coefficients were calculated. The scale's, which is reduced to 26 propositions, internal consistency/reliability coefficient alpha was found to be $\alpha = 0.905$. In addition, each internal factor's consistency/reliability coefficient values were also found. Cronbach's Alpha reliability coefficient is statistically sufficient and it is revealed that the scale is a consistent and reliable one.

Table 2 shows five items obtained from factor analysis, eigenvalues and variance for these and ratios indicating them, besides factor load values that shows each item of the scale with which factor they are associated with. The total rate five factor's ability to explain the variance is determined to be 62.59%.

3.3. Accommodation Business' Managers' Attitude Towards Vocational Tourism Education

Responses to given propositions in respect to the factors were examined in detail in order to understand accommodation business managers' attitudes towards vocational tourism education responses. Answers to each question of the managers are tried to determine in Table 3 in percentages. Considering their responses, for this reason, the propositions are grouped under three main groups as "Agree", "Undecided" and "Don't agree". To ensure this, the proposition "Totally agree" is combined with the statement that "Agreed" and participants were formed in the same group. Likewise, the proposition "Don't agree" and "Don't agree at all" were also categorized in the same group.

Table 3. Accommodation Business' Managers' Attitude Towards Vocational Tourism Education

	Disagree		Undecided		Agree	
	The	%	The	%	The	%
Factor 1: Performance and Efficiency						
• Employees have received vocational tourism education are more likely to team work.	29	14,5	28	14,0	143	71,5
• Communication skills of employees have received vocational tourism education is high.	24	11,9	45	22,3	133	65,8
• Tourism employees have received vocational education has a higher degree of profitability.	38	19,1	51	25,6	110	55,3
• Employees have received education to work with the tourism increases the work efficiency.	22	10,9	25	12,4	154	76,6
• Employees have received vocational tourism education depends more on the job.	54	27,1	63	31,7	82	41,2
• Working with vocational tourism educated employees lightens my workload.	36	18,2	39	19,7	123	62,1
• Working with employees has received vocational tourism education jobs are made much easier.	34	16,8	32	15,8	136	67,3
• Employees have received vocational tourism education is to bring about a difference in comparison to other employees.	27	13,4	43	21,4	131	65,2
• Work with employees who have taken vocational tourism education reduces customer complaints.	30	14,9	36	17,9	135	67,2
• Employees have received vocational education in tourism is more proper in their job.	29	14,4	52	25,9	120	59,7
• Employees have received vocational tourism education solve problems easier than others.	32	15,8	45	22,3	125	61,9
Factor 2: Customer Relations						
• Employees who have received vocational tourism education more effectively fulfill the expectations of the customers.	31	15,6	45	22,6	123	61,8
• Customer relationships that employees who have received vocational tourism education is stronger.	25	12,4	45	22,4	131	65,2
• Vocational tourism educated employees offer better quality of service.	29	14,4	34	16,8	139	68,8
• Employees have received vocational education in tourism communicate better with customers.	25	12,4	41	20,4	135	67,2
• Vocational tourism educated employees increase customer satisfaction.	25	12,3	46	22,7	131	64,5
Factor 3: Employment Preferences and Priorities						
• Vocational tourism educated employees more preferable compared to other employees.	23	11,4	26	12,9	153	75,7
• I would like to employ more vocational tourism educated employees.	14	6,9	32	15,8	156	77,2
• Vocational tourism educated employees have priority in recruitment.	24	11,9	29	14,4	148	73,6
• Having vocational education affect employees' careers positively.	13	6,4	26	12,8	164	80,8
Factor 4: Professional Knowledge and Skills						
• Professional knowledge of the employees who have received vocational tourism education is sufficient.	76	38,2	55	27,6	68	34,2
• Education of employees satisfies sector's needs.	64	31,7	55	27,2	83	41,1
• Professional skills of the employees who have received vocational tourism education is sufficient.	83	41,1	64	31,7	55	27,2
Factor 5: Wage						
• Vocational tourism educated employees are demanding higher wages.	38	18,8	40	19,8	124	61,4
• Vocational tourism educated employees must receive different wages.	55	27,1	33	16,3	115	56,7

According to the results listed in Table 3, more than half of the managers of the hospitality business think that tourism employees who have received vocational education contribute positively to the business, and they have to increase business performance and productivity. According to accommodation business managers, these employees were found to have an attitude to increase the business profitability, to have good teamwork skills, to reduce customer complaints significantly, to easily communicate with both employees and customers. When the opinions of accommodation businesses manager about the customer relationships of employees are examined of more than half of the studied managers claim that the employees with vocational education provide a better

quality of service and customer expectations has fulfilled more effectively, with better communication and they are found to have a responsible attitude towards increased customer satisfaction. According to the results listed in Table 3, more than half of accommodation business managers say they wish to employ more workers who have received vocational tourism education, these employees have a priority at recruitment and the employees' careers affected positively due to their education. Regarding to results, accommodation managers claim these tourism workers demand higher wages and they should receive different wages. When the results of the accommodation managers on the professional knowledge and skills of employees have received vocational education in tourism examined, it is seen that the answers given vary according to other dimensions. More than half of the managers say that vocational tourism educated staff's knowledge and skills are not sufficient or they are undecided about the issue and these employees are not qualified as the sector need them to be.

3.4. Variable Attitudes of Accommodation Managers Toward Vocational Tourism Education According to Demographic Change

In order to reveal to show changes in attitudes towards vocational tourism education by demographic characteristics of managers, t-test and ANOVA analyzes were performed.

Table 4. T-test and ANOVA Analysis Results

Descriptive Characteristics		Performance and Productivity	Customer Relations	Employment Preferences and Priorities	Professional Knowledge and Skills	Wage
Sex	The	x ± SD	x ± SD	x ± SD	x ± SD	x ± SD
Woman	68	± 3.54, 789	± 3.64, 727	± 3.92, 715	± 3.01, 807	± 3.52, 921
Male	135	± 3.69, 648	± 3.66, 957	± 3.91, 793	± 2.98, 849	± 3.50, 953
t test		p = 164 (t = 1.396)	p = 870 (t = 163)	p = 966 (t = 0.43)	p = 810 (t = 0.240)	p = 834 (t = 209)
Age	The	x ± SD	x ± SD	x ± SD	x ± SD	x ± SD
18-25 years	15	± 3.81, 806	± 3.97, 636	± 3.87, 989	3.24 ± ., 683	± 3.73, 961
26-32 years	55	± 3.62, 745	± 3.58, 883	± 3.89, 771	± 3.04, 929	± 3.60, 919
33-40 years	69	± 3.63, 716	± 3.62, 774	± 3.86, 803	± 3.02, 849	3.40 ± 1.04
41-48 years	46	± 3.58, 688	± 3.64, 1.19	± 3.98, 715	± 2.86, 768	± 3.47, 816
49-55 years	16	± 3.74, 437	± 3.80, 432	± 4.01, 530	± 2.79, 697	± 3.46, 921
56 years and over	2	± 3.63, 771	± 3.80, 848	± 4.50, 707	± 3.16, 1.17	± 4.00, 707
Anova Analysis		p =, 925 (F = 278)	p =, 758 (F = 524)	p =, 826 (F = 432)	p =, 587 (F = 750)	p =, 731 (F = 560)
Department	The	x ± SD	x ± SD	x ± SD	x ± SD	x ± SD
General manager	33	± 3.70, 764	3.81 ± 1.41	± 4.12, 800	± 2.71, 829	3.83 ± 657
Front Office	40	± 3.81, 576	± 3.66, 686	± 3.98, 712	± 3.16, 776	± 3.72, 706
Accounting	13	± 3.94, 623	± 4.01, 528	± 4.26, 553	± 3.17, 908	± 3.69, 830
Housekeeping	35	± 3.46, 799	± 3.46, 775	± 3.80, 745	± 2.84, 772	3.30 ± 1.17
Food and Beverage	47	± 3.55, 726	± 3.50, 795	± 3.80, 850	± 2.94, 857	3.22 ± 1.00
Other	35	± 3.60, 603	± 3.78, 677	± 3.78, 722	± 3.21, 836	± 3.47, 977
Anova Analysis		p =, 197 (F = 1.485)	p = 250 (F = 1.337)	p = 135 (F = 1706)	p =, 087 (F = 1.959)	p = 028 * (F = 2.577)
Education	The	x ± SD	x ± SD	x ± SD	x ± SD	x ± SD
Primary education	37	± 3.48, 699	± 3.37, 846	± 3.69, 735	± 2.90, 715	3.08 ± 1.13
High school	67	± 3.58, 731	± 3.54, 797	± 3.84, 868	± 2.96, 848	3.34 ± 1.02
Associate	38	± 3.66, 572	3.87 ± 1.35	± 3.90, 648	± 3.32, 749	± 3.82, 680
Bachelor's degree	61	± 3.78, 731	3.83 ± 769	± 4.13, 695	± 2.87, 895	± 3.74, 716
Anova Analysis		p =, 216 (F = 1.500)	p = 022 * (F = 3.282)	p = 039 * (F = 2.845)	p =, 051 (F = 2.643)	p =, 000 * (F = 6.375)
Hotel Type	The	x ± SD	x ± SD	x ± SD	x ± SD	x ± SD
5 Stars Hotels	83	± 3.55, 729	± 3.61, 742	± 3.88, 719	± 2.90, 832	± 3.45, 957
4 Stars Hotel	86	± 3.71, 696	3.62 ± 1.06	± 3.94, 810	± 3.15, 807	± 3.54, 961
Apart Hotel	34	± 3.66, 641	± 3.85, 675	± 3.94, 785	± 2.81, 854	± 3.55, 868
Anova Analysis		p =, 354 (F = 1.045)	p =, 388 (F =, 952)	p =, 849 (F = 164)	p =, 060 (F = 2.849)	p =, 804 (F = 218)
Working Time	The	x ± SD	x ± SD	x ± SD	x ± SD	x ± SD
0-1 years	43	± 3.62, 732	± 3.61, 794	± 3.85, 728	± 2.97, 804	3.36 ± 1.04
2-5 years	72	± 3.77, 771	± 3.82, 711	± 4.00, 841	± 3.10, 905	± 3.64, 834
6-9 years	49	± 3.44, 673	± 3.49, 832	± 3.75, 784	± 2.81, 749	± 3.37, 997
10 years and over	38	± 3.68, 520	3.60 ± 1.25	± 4.03, 618	± 3.00, 806	± 3.57, 926
Anova		p =, 108 (F = 2.052)	p =, 241 (F =	p = 254 (F = 1.369)	p =, 306 (F = 1.212)	p =, 306 (F = 1.212)

Analysis			1.102)			
Tourism Education	The	x ± SD	x ± SD	x ± SD	x ± SD	x ± SD
Yes	112	± 3.77, 629	± 3.84, 971	± 4.10, 672	± 3.00, 868	± 3.60, 952
No	91	± 3.49, 752	± 3.44, 718	± 3.69, 817	± 2.97, 792	3.38 ± 917
t test		p = .006 * (t = 2.778)	p = .001 * (t = 3.235)	p = .000 * (t = 3.822)	p = .792 (t = .264)	p = .101 (t = 1.645)
x ± SD: mean ± standard deviation; *. P < 0.05; 1: Totally agree 5: Don't agree at all						

According to t-test results in Table 4, gender of tourism accommodation business managers' attitudes towards vocational education does not differ statistically. However, managers' attitudes towards vocational tourism education differ in three dimensions in statistical terms based on whether they have received education. Vocational tourism educated managers are more likely to think that the employees have received tourism education improve the productivity and performance of business than the managers without vocational education, and this difference is found to be statistically significant ($p = .006$; $t = 2.778$). Similarly, tourism educated managers claim that tourism educated employees will provide an increase in customer satisfaction while the managers without education do not agree, and this difference found statistically significant ($p = .001$; $t = 3.235$). Tourism educated managers, again, tend to work with vocational tourism educated employees in human resource selection preferences compared to the managers without education and the choice's statistical significance is determined ($p = .000$; $t = 3.822$).

Anova Test results situated in Table 4 shows that the attitudes of the managers toward vocational education do not differ in the statistical sense according to the age of managers, to the type of hotel they are working in and to their working time variable. But it has been found the attitude differs according to the department they work in and to their education levels in the statistical sense. When the departmental variables are examined, managers are observed to show differences, according to their departments, about the vocational tourism educated employees' demand for more wages, and this variation is found to be statistically significant as ($p = .028$; $t = 2.577$). When the education variable is observed, differentiation occurs in three different dimensions. Hospitality management managers attitudes towards the belief that vocational tourism educated workers' ability to ensure customer satisfaction higher than the other workers differs according to their educational level, and this difference is found to be statistically significant as ($p = .022$; $t = 3.282$). Similarly, managers also vary according to their level of education in their attitude towards giving priority to the employees who have taken vocational tourism education in the recruitment, and this difference is identified statistically significant as ($p = .039$; $t = 2.845$) that have been identified. Finally, accommodation business managers also show a similar difference due to their education level about the demand for more wages of employees with vocational tourism education and their opinion whether these employees deserve more wages, and this difference is found to be statistically significant as ($p = .000$, $t = 6.375$).

4. Conclusion

This research conducted in Alanya in order to determine the attitudes of accommodation business managers towards employees who have taken vocational education of tourism. And it is seen that business managers' attitudes toward the employees improve their business performance and productivity. Accordingly, it can be said that employment of employees with vocational tourism education is likely to increase business' productivity. Likewise accommodation businesses' department managers think that these employees create a positive effect on customer relations. According to the results, working with employees who have taken vocational tourism education, businesses can increase the quality of service customer satisfaction. Another results obtained in this study are about employment and wages. The fact that businesses managers are likely to prefer employees with a vocational education and their choice on them has been identified as a priority in the recruitment. It is revealed that managers believe that having a vocational education affects employees' careers in a positive way. 57 % of department managers assert that there should be a difference between the wages of employees in accordance with their vocational tourism education level.

In the study, it is proved that attitudes towards vocational education of tourism of accommodation business manager have not differed in gender. But whether administrators have received vocational education of tourism has been identified as a cause of differences in the same attitude. Based on this conclusion, tourism managers seem to have the belief that tourism educated employees' increase business performance and productivity, and the customer satisfaction. Moreover, it is found that managers who have received vocational education on tourism are more likely to give priority to the employees with a vocational education when hiring a new employee than the managers who has not received education. In the study, a difference based on age, type of hotel and tourism, or in terms of running time has not been found.

Tourism accommodation businesses' managers think that wage policy should be different for employees who have vocational tourism education and these employees is determined that they demand higher wages. According to the studies on students who receive vocational tourism education, they indicate that wages are low in the tourism sector and that their education does not create differences in wages when compared to the employees

who do not have education (Duman et al., 2006). However, some studies shows that the students who have received vocational education in the tourism sector, have expectations that they can be paid better (Roney and Öztin, 2007; Çatı and Bilgin, 2013). Survey results prove that the attitude of managers towards educated employees about the wages depends on which department they work. Similarly, it is seen that the level of education of the managers has an effect on the attitude towards the employees have received vocational education, on their preference and priority in recruitment, on wages and on customer relations.

Despite the increasing number of higher tourism education institutions as well as secondary ones, the most important problem faced by Turkish tourism is found as the shortage of qualified employees. Studies show that the number of graduates who have taken the tourism education does not reflect to the sector at the same rate. It is understood that how important are the employees who have received vocational education is understood as a result of this research. According to the findings of the research, accommodation business managers report that educated employees increase operating performance, profitability, operational efficiency and customer satisfaction. However, despite these results, managers find employees' vocational education insufficient. This situation creates the impression that the quality of vocational tourism education in the institutions is not adequate and qualified to satisfy the needs of the industry. It can be thought upgrading vocational education institutions' educational quality will have a positive effect on businesses' productivity and profitability and provide competitive advantage to the businesses in tourism sector. Cooperation between educational institutions and the tourism industry that cover taking the views of the industry in the development of course curriculum, addition of the subjects and courses needed by the business to the curriculum will provide significant benefits for vocational tourism education quality.

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Acritical review to the media which constructed in media literary course in secondary education

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Abstract

Nowadays, in which mass media has been widespread and effective nearly in all parts of our life, the importance of media literacy has increased both in the world and Turkey. Not only is media enhancing its area of activity by means of the opportunities of communication technologies, but also has started to distribute various and excessive information. The course of media literacy, which is supposed to have some functions, such as reaching “the truth” from this excessive information, analyzing the reached information and evaluating primarily has entered the curriculum of the faculty of communication in Turkey and has started to be given as an elective course in the curriculum of secondary education from 2007-2008 Academic Year. This study will deal with edited media, which is taught in media literacy in secondary education, in a critical perspective that is often referred in communication studies. And in this study, edited media, in Media Literacy Teacher Resource Book, has been chosen as a research item.

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Peer-review under responsibility of the Sakarya University.

Keywords: Media literacy; critical media studies; education of media literacy in Turkey.

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Introduction

It is known that media, an important source of information in circulation in social area today, has significant effects on daily life experiences. It is not wrong to express that almost all individuals are influenced in a way by the informative, cultivating, educative, enlightening, gaining new models of life and behavior, entertaining, argumentative, socializing features of media, which has been important establishment of socialization (Vural, 2001: 117-118). That media, which offers a series of image, idea and evaluation to the individuals, who will be able to use while identifying their own styles of behaviors (Mcquail and Mindahl, 1997: 115), can be said to have come forward relatively to other socialization theories with influencing more or less all individuals of the society and permanence of this effect.

The significance and influence of media, which circulate a great deal of symbols, values, information and news edited by professionals everyday in modern societies as a part of daily life cannot be denied. People, who have never spoken face to face in modern society, are able to share a widespread experience and collective memory with products of culture that media offers (Thompson, 1992: 163). Yet, a modern individual can be said to have had the inspiration that will be enough for his/her intellectual movement in every circumstance from newspapers or televisions (Güneş, 1995: 51). In addition, that media, which is an important variation in consisting of collective memory, has built the reality in which this memory is consisted or the framework of this reality can be expressed. As Ramonet stated, whatever radios, televisions or newspapers show about an event or phenomena, is considered real. Even if this is wrong, the right thing is the one all media has accepted correct (Ramonet, 2000: 52).

Media, known to have effect on societies, is seen to raise and deepen its area of activity with the development of communication technologies. Nowadays, media products (sound, vision, text), which are produced in any parts of the world, have been a matter of time to reach the rest of the world in order to exceed the geographical and national borders by means of systems which have no obstacles technologically. The contents -especially negative- which have been produced in media equipped with technological possibilities and thereby have become global, have started to be seen as an important problem not only for individuals but also for societies and countries. States or societies which try to come through these problems are seen to take various precautions so as to accommodate these new circumstances that media has globalized. As precautions are being taken especially for the protection of children and teenagers, the curriculum has started to be revised in order that this part of the society can use the contents of media more consciously, as well.

Most countries are known to take action by defining national policies to protect especially children and teenagers from negative effects of media and increase the level of consciousness against media which is exposed to accusations like false consciousness, misguidance, concealing facts. Ultimately, today the lesson of media literacy takes part in the curriculum of primary and secondary education under various names like, media education, media pedagogies, media instruction, media literacy, computer literacy, internet literacy and electronic literacy (İnal, 2009: 13). The lesson of media literacy has been offered as elective course in secondary education since 2007-2008 academic years in Turkey.

It will not be wrong to say that the lesson of media literacy, which aims generally to improve a conscious attitude or behavior against the contents of media, is to be taught with critical perspective due to its aim. Media, which will be established in this course, as expressed in the studies of critical communication, can be analyzed in the framework of "media", whose contents are formulated with a specific ideological perspective. And this study deals with the constructed media in a framework of critical approach in communication studies. This media is constructed in Media Literacy Teacher's Guide Book which shows the process of Media literacy lesson that takes place in the curriculum of secondary education as an elective course.

The Development of Media Literacy in Turkey and the World

Generally speaking, the connection between media and education is seen to have been established in 1930's with the popularization of the means of communications like, newspaper, telephone, radio and television. The idea of benefitting from these means which can reach the messages formulated from a certain center to masses, as an education material, has densely been articulated in USA and Europe especially in 1920's and 1930's (İnal, 2009: 13). Therefore, the ideas or applications about proper usage of media are seen to have emerged initially in 1930's in Europe and USA even if the concept of media literacy wasn't used. Media education which started in the USA in 1932, had repercussions in Europe especially in England and Scandinavian countries in 1970's and came into question of European Union at the beginning of 2000's.

The thought of citizen's protection against negative effects of media, which globalized especially after 1980's, has been clarified. The importance of education of media literacy has started to have been discussed in various projects by international institutions; it has been alleged that there is a need to the new and rich

communication skills so as to live as an active citizen in a world equipped with messages consisted by press and visual media (Türkoğlu, 2007: 95 transmitted by İnal, 2009: 37). UNESCO, which tries to keep on the agenda the media literacy from 1960's till now, has held a meeting of which experts of nineteen countries have attended in Federal Germany on 22 January 1982. And in the declaration at the end of this meeting, among the users of media texts, the responsibilities of families, formal-informal institutions of education, teachers, media workers, and decision makers to develop the criticism, have been emphasized (Buckingham, 2014). As seen, when we consider the development process of media literacy from 1970's till now, gaining a technical ability about media or consisting its own media can be said to have transformed into a form of enlightenment or awareness that will provide protection against negative effects of media instead of the skill of distributing the messages.

Nowadays, it can be seen that there are plenty of countries which have noticed the importance of media literacy and have arranged their education policies in this way. The course of media literacy is being taught in different names or ways initially in developed countries such as, the USA, Canada, Australia, Japan, France, Germany, Italy, Spain, England, Austria, Belgium and Switzerland and in some countries of Africa and Asia and in Australia. But in Turkey, the ideas which correlate the relation of education with mass media are seen to have occurred from the beginning of 1930's till the end of it (See. İnal, 2009: 148). However, whether these ideas will be evaluated or not within the scope of media literacy, which expresses being informed and conscious against media texts, is an issue that is moot. These ideas are in fact focused on usage of education as an instrument of mass media. So, it will not be wrong to state that the education of media literacy is new in today's Turkey. To be included in the curriculum of secondary education, the course of media literacy, which was formerly seen in faculties of communication, were carried out in 2007-2008 academic year. The lesson which was taught compulsorily in a lot of faculties of communication is being taught as an elective course in secondary education.

The Concept of Media Literacy

It can be said that there is not an exact definition or category of definition to achieve consensus upon when literature in media literacy is examined generally. On the other hand, it is possible to describe what is intended with this concept or the definition referred to this concept. Generally, media literacy can be described as an access to the messages in different formats (television, video, cinema, advertisement, internet, etc...) analyzing them (critically), evaluation and ability to transmit (Inceoğlu, 2011:19). Similarly, it can be explained as an access to the content in any media, analyzing them, evaluating and the ability of creating the new ones (Hepkon and Aydın, 2011: 74). Education within media literacy can be described as society's access of consciousness that will provide it to perceive the disadvantages with media, power, and ideology and the process of gaining the awareness, as well (Taşkıran, 2007: v).

As it is understood from the definitions, the concept of media literacy is seen to have emphasized on two main points. The first and more prominent one is the media literacy of which the individual's evaluating the messages from media critically, the ability to filter and equipped with its knowledge. But, the second one points out the ability of recognizing and using the knowledge of (media, especially the new one) in a way of creating its own messages (Pekman, 2011: 37). Similarly to these definitions and explanations, many descriptions which try to explain the concept can be aligned. Nevertheless, as it was expressed before, we should state that a framework of definition which deals with the concept of media literacy in all ways and which is accepted with the studies done in this field, is not available. This situation can be attributed to the diversity of approaches which deal with media literacy from different angles. While classifying the kinds of approaches on the issue, you can go to dual distinction, like an approach which sees media literacy as an educational problem and an approach which sees it as a political and ideological preference (Hepkon and Aydın, 2011: 74). This dual distinction is in the capacity of leading up to the approaches of mainstream media literacy and critical media literacy as well.

The Necessity of Media Literacy

Today, with the opportunities enabled by communication technologies, media has been increasing its activity of the field and has started to distribute various and excessive information, too. To reach "the right" through this excessive information, to analyze the attained information correctly or to deliver the messages by creating its own field especially with the internet, which diversifies media, has become an important skill. The need for this skill, which is described as media literacy, has emerged by transferring to the audience the contents of media which are associated with ideology, popular culture, consumption patterns, and tabloidization in press, visual and electronic field (Karakoç and Avcı, 2013: 142). Based on previously described, the necessity of looking at the media contents with a critical perspective arises. Attitudes or behaviors which are being tried to be gained can be listed as follows: (1) understanding the meaning how media messages have constructed, (2) identifying the ones who have created the certain media messages, (3) understanding the things what to be believed or what to be

wanted to be done of constructors of media messages, (4) defining the tools or methods of persuasion used, (5) understanding the prejudices, wrong information, lies in media messages, (6) discovering that there is always a part of story that is not mentioned in media texts, (7) evaluating media messages in the framework of their own experience, beliefs and values, (8) create and distribute its own media messages (medialiteracyproject.org. 12.04.2014).

Overall, attitudes and skills, which are targeted to be gained with media literacy, indicate that media is not a tool which is the voice of all parts of society, which meets the need for information in an objective manner, and which follows conscious editorial policies. Even if it is implicit, media is assumed to have caused wrong consciousness, misleading and disinformation with the messages it has been distributing. Hence, the need of supervision in some way of media, whose effect is widely accepted, arises. Today, even the control is not done obviously with the censorship mechanism; countries/societies apply to the measures like media literacy course so as to protect from strong influence of media exposed to considered accusations or to take advantage of media enough as an educational tool.

With media literary course, students are supposed to realize that the information which some of the media coverage offers is subjective, carefully selected, edited with a certain perspective and a reproduction that is consisted of several effects. In addition, it is emphasized that as commercial devices, media organizations have undertaken the function how to consist a consumer appetite on people through ads, movies, music etc. (İlköğretim Medya Okuryazarlığı Dersi Öğretim Programı ve Kılavuzu, 2006). Young people and children, who get much everyday or non-everyday information from media with the course, are expected to develop a critical way of thinking in order to understand the messages correctly. When they need, it is asked from students to create their own media and acquire the ability to distribute messages. Forasmuch, this dynamic segment of society, whose interaction with media increases everyday, who gets an important part of information they need from media, can be said to have exposed to the negative effects of media more. It is seen as a general acceptance that children and young people who are among the most important media consumers should be informed about and aware of media (İnal, 2009: 17). That the efforts of enlightenment or awareness against media contents need to be shown, to not only young people or children but also to adults, is emphasized. Because, in order that people can be citizens who adopt democracy in the global media culture, they should have the critical way of thinking which media literacy will bring and the ability to express himself/herself (Jols and Thoman, 2008: 14). Therefore, media literacy, also foresees a type of citizen equipped with skills who will be able to express oneself, who will be able to access all kinds of information about society, who will be able to evaluate the information correctly and who will be able to think critically against media that he/she acquired the information. This type of citizen, who is in recognition of what is happening around, indicates a democratic citizen type, who is willing to participate in the process of making social/political decisions, who is able to develop conscious behavior in the process of decisions, who is able to decide consciously and be aware of the responsibilities.

Critical Media Literacy

As can be seen, media literacy is not just the ability to access media contents, evaluate and analyze them or distribute his/her messages by creating his/her own media. At the same time, it brings on the necessity of critical mind in the framework of critical and democratic citizenship (Türkoğlu, 2011: 254). This form of literacy, which is described as critical media literacy, aims citizens to take part in any decision mechanisms as an active actor in social, cultural, political and economic fields. And also, it aims citizens to gain the ability to take responsible of the decisions they make. Critical media literacy develops awareness on individuals against greed, ruthlessness, intolerance in media contents in circulation, insensitivity and indifference against the others' pain, war-mongering, the racism, pacifism, sexism and homophobia (Binark and Bek, 2010: 10). It does not only develop conscience but also leads the individual to take action and generate towards the developed awareness. Thus, critical media literacy may lead to the development of democratic consciousness especially with the effect of some concepts (such as responsible, participatory, active citizenship) that progressive politics and ideologies insist on emphasizing (İnal, 2009: 19). Critical media literacy is accepted as a reproducer of dominant values in everyday life of both traditional and new media. And it expects from media literacy to develop an awareness of questioning of the dominant values reproduced continuously and inserted into social spheres. Therefore, it requires media, which is constructed in media literacy, to be dealt with in a critical perspective.

Critical Approach to "Media" in Media Literacy

Nowadays, that media literacy comes up with the critical notion stems from media's, which is the actual perpetrator of the field, social situation and quality of the content it produces. Critical approach to media assumes to serve their consent of media texts in general, the owners of capital surplus replication in market

economy, reproducing their beings, their legitimacy, hence given and naturalized of dominant classes of dependent classes in society (Binark and Bek, 2010: 47). Thus, as liberal media theories claim, media, which is in the same distance to all social strata and not an area in which all strata express themselves, sees itself as an ideological tool which is under the control of society's dominant class. Audiences/consumers who receive the messages distributed from media, which is monopolized under the control of dominant class, can interpret these messages in various ways, as they have different life experiences. However, the production of meaning from these texts is the activity of audiences/consumers; it does not eliminate the fact that media texts are produced within the institutional structure of market relations (Binark and Bek, 2010: 47-48). On that condition, critical media literacy is necessary to arise against manipulation, disinformation and inaccurate awareness of media, which does not transfer the reality in all ways due to its nature, but transfers by building the reflection of the reality inside itself. Now, the important thing here is not taking advantage of the media as an educational tool or learning it technically, but consistence of its democratic and participatory consciousness structure or model against manipulative nature of the media may be alleged. Media, which has been industrialized, monopolized and turned into a tool that serves to specific class benefits, has failed to create responsible, conscious and critical citizens (İnal, 2009: 15-16). Besides, it can be said that critical media literacy has started to be visible on the thought that mass media field has to lead a more functional role in establishment and institutionalization of democracy.

As seen, media, which is assumed by critical media literacy, in fact can be said to be which critical approach describes in communication studies. Media's ownership structure, impacts on cultural structure, critical media approach which emphasizes on ideological elements in media contents, actually observes the relationship among media, communication and social powers (Fejes, 1999: 310). According to critical approach which follows the idea (although not all aspects) of class structure of society of Marxist theory, class, which has economical values in a society, would also have the potential to shape the mental and intellectual world of that society. Critical approach, which is based on the assumption that the ones who keep control of the means of production are the ones who keep the control of media, the power of media which shapes our awareness against things, which determines the agenda, which reinforces specific ideas, but which slanders some, always serves to the interests of ruling classes (Berger, 1990: 157). The ruling classes uses media to ensure the continuation of their power, to legitimize their ideology, to adopt their cultural values and to spread their view of the world. Media, which reproduces and legitimizes the ideologies and the worldview of dominant class, generalizes thoughts belong to this class, as well. It is seen as a "tout" which strengthens its opinions in society. Consequently, media creates a mental framework which is created with opinions of ruling class by transferring messages that are always compatible with the interest of it. Media also creates an "illusion of freedom" for audiences by granting the freedom to act within the borders of this mental framework. Each individual, who is exceeding the limits of this framework, is pushed out of the system; and is considered "the other" or "the enemy".

Impact of media on audiences in critical media studies, is seen in creation and maintenance of hegemonic system (Fejes, 1999: 313). Audiences, even they sometimes try to overcome or struggle with the hegemonic system, formed in accordance with the opinions of the ruling class, are unlikely to obtain alternative means for opponent definitions so as to reject the definitions offered by media (Gurevitch, 1986: 1). According to critical thinking, the images and definitions which media provides for audiences are distorted and incorrectly transferred state of reality. Because, these definitions and images have been formed in accordance with governing political and economic groups' own interests. Thus, critical commentators adopt the view that media is strong and has the power and is creating "false consciousness" ideologically for the audiences and resuming by preserving status quo (Berger, 1990: 137).

Critical approach and described orthodox interpretation to media, which rises above classical Marxist thought, are known to undergo revision over time. While abandoning the idea that media is manipulating the mass in such a simple way, the thought that it is not completely under control of ruling class, and thus it is autonomous in specific proportions, but its effects are not as strong as assumed, becomes common. For example, Berger, who established interesting detections about media manipulation, expresses that even media owners are affected by the false consciousness that media distributes. According to Berger, who mentions "a mediatic system" and says media is beyond a tool used by dominant class so as to keep masses under control, both media owners and controllers of media and people who see and hear these messages believe in ideological messages. So, that's not a conscious manipulation but is the unconscious proliferation of ideological thought by the owners of media (Berger, 1990: 156).

After general detections of critical theories are shown related the media, which is described in critical media literacy, the constructed media taught in media literacy course in secondary education in Turkey, can be evaluated with perspectives described.

In Turkey, two foundations are featured in the studies on media literacy in secondary education: The Ministry of Education (MEB) and The Supreme Board of Radio and Television (RTÜK). It can be said that especially RTÜK may give more importance to media literacy with the projects it held, with applications, with educations it gave and with documents it published. The Media Literacy Course Teacher's Guide Book, on which this study is carried out, has also been prepared by RTÜK. It has been accepted as educational tool by the 23.07.2008 and 5711 decree of the Ministry of Education Board. And it has begun to be used in media literacy course, which is an elective course in 6th, 7th and 8th grades. When we look into education system in Turkey in general, due to the fact that classroom training effectiveness is practically teacher-based, education in media literacy course may give more effective results by examining it through teacher's guide book. The first pages of it, like other textbooks taught in secondary education, consist of the National Anthem, Atatürk's Address to Youth and a picture of Atatürk. General aims of Turkish national education are arranged in the way they are written in National Education Basic Law. The aim of Turkish national education is emphasized as bringing up citizens, as well as the behaviors and skills intended to gain with education, that all the members of Turkish nation are loyal to nationalism of Atatürk; they adopt, protect and enhance the national, moral, spiritual and cultural values of Turkish nation; they love their family, country and nation and try to exalt them every time; they know their duties and responsibilities against Republic of Turkey, which is a democratic, secular and social state that is based on the human rights and the basic principles at the beginning of the Constitution (p.19).

It must be pointed out that, the arrangement of general aims of Turkish national education means that it is a reminding again to the teacher the necessity of teaching media literacy course compatibly throughout aims stated. It is seen that the media literacy course's general approach, which is supposed to be taught towards sorted aims, is mostly based on synthesis of protecting and informing children. This synthesis is expressed like this in the text written to the teacher who will be giving the lesson and participating in the book: "In this lesson it is aimed that children who are in defenseless condition against on visual, audial and written media should be growth as a person who can follow media, who achieved the level so as to be able to decode the media language, who can critic the media instead of a passive receiver against the media by informing from the beginning of the primary school" (p.18).

The necessity of the media literacy course is expressed like this in the book in which children are considered as the most sensitive and open group to be affected against television: "Another danger of being clear of television messages for children is that children believe the possibility of its' reality by they perceive as real what they see as they are not at the age of being able to distinguish real and fiction" (p.20). In the expressions it can be said that negative effects of media is put forward in a similar way to main stream of media literacy. Nevertheless, it is seen that there has not been done any emphasis about whether critical media literacy can be done in a field in which fiction is mixed up with the dominant values in society or interests of social class while it is emphasized that media messages are fiction as critical media literacy claims. However, in the book it is seen that it contains some evaluations which digressions regarding to media context can be considered within critical media literacy after the aims of media broadcast are ordered as, to persuade, to enjoy, to inform, to explain, to supply gain under the title "Assessment and Measurement in the Media Literacy Course" (p.26). It is also listed some skills which are expected to be improved in student with the media literacy course within the scope in which general qualifications of media and media texts are described" (p.26).

First of all, all of the media products are described as packages wrapped up carefully by emphasizing essentially to improve the ability to understand contents of media messages to show the students how the aims of mass media are configured. It is pointed out that meanwhile wrapping messages, to be shown naturally receiver, are positioned in wrapping carefully. Secondly, it is expressed that media which makes up changing shapes of reality configures realities according to the receiver society's purpose, tendency and ideas. Thereby, it is pointed out essentially of gaining skill of commenting text to tell differences between text forms via Media Literacy Course. Thirdly, it is expressed that students who take the lesson can also react differently against the media texts by expressing every person can develop different reaction against on media contexts. Fourthly, there is not any information about media contents are affected from economic and trade area as critical media literacy points out while it is emphasized that media is a sector that needs to gain money and economic support to market its products to audiences. The last point at which it is told about function of media's ideology, it is pointed out that media makes agenda, some media forms aim an audience mass which heap up around some ideologies or some values and it is an important skill to discover media forms and value agendas in analysis of social communication devices.

When we look at the media in which its contents aims to protect children from media's negative contents and against this to inform children, make them be able to look critically media contents, it is expressed that there's not any mentioned media description which is equal to critical media literacy. The media's functions book in which mass media and their publication is described as media: (1) giving information, (2) socialize, (3) education, (4) amusement, (5) protection of cultural values, (6) creating public opinion, (7) advertise.

Function of giving information which is described as the most important function of media is “reaches both national and international information and news which belong to life's enormous area to people via media tools”. It is told as “We are being informed just as we are being led” (p.64-65). Although the concept of “guidance” which is very important in terms of critical media studies is emphasized, it is seen that there is no other detail in relation to the concept. It is told in the book socialization function of media is told as “Media makes easy person to become integrated and adapt to social life” (p.64) just like perspective of liberal media describes it. Education function is expressed with a similar perspective with these expressions: “The media helps people, especially children in development age, by developing their perception, ability, mind level” (p.64). The media whose functions are described in the book is seen as a device which come forward with its positive sides instead of a device which is need to be well minded and full of knowledge against media's negative sides as it is expressed in perspective of critical media literacy. It is pointed out that media serves its amusement function by saving people from life's boredom. Amusement function is expressed with these sentences like this: “it gives a chance to people to have fun and get away from routine of social life” (p.65). It can be said that the distance between the media edited in the book and critical media literacy that is to say the media which critical communication approaches describe, is opened only in matter of media's effort making public opinion. Media is edited in the book in which it is pointed that media serves a social task, as a device which inspects in the name of public like this: “the public foundation has right to criticize and inspect in the name of public. It acts as conscience of public so as to advocate citizen rights” (s.65). It can be expressed that media's presentation function which has important roles on protecting cultural values, keeping alive it and developing it provided that it should be used well, is told with the perspective of advertisement area. “Media is the most important presentation device of countries, companies, foundations, even people. Today's economy is based on marketing. Market's most important device is media, as well” (s.65). Media's role in the free marketing economy is expressed particularly in the text in which free marketing economy is emphasized.

Expressing that media serves its ordered functions or media is functional can be said that it is a matter of liberal media's approach rather than a paradigm of critical media literacy. The liberal approach which claims that media stays in the same distance to the all parts of public, also expresses that media serves some functions in public. Media which is pointed out that it supports democracy, fulfills publics' desires, is seen as a functional foundation which is combining public with this shape. According to the liberal ideology, it is out of the question that neither of groups or benefits has always domination above them. Media is an independent foundation from dominant groups or political parties or government. Media is considered as “watchdog” which is independent from government's domination, power and criticizes them. This role of media is sometimes considered as “forth power” (Trompsan, 1992: 248). Thereby, it can be pointed out that it's not really possible that media which is described with its only functions cannot gather skills which is tried to be gained to children with critical media literacy.

Conclusion

It can be said that media literacy, which aims individuals to be knowledgeable and conscious against media contents, whose effect is known gradually increasing with the developments in mass media technologies, has two important functions. The first one is, individual's developing a critical perspective against media contents that reach him/her, being equipped with the ability and knowledge to filter messages; the latter is gaining the ability to transfer messages to others by creating his/her own media. It can be expressed that both situations indicate a critique as a result of the lack of current established media or not processing in the way that it is wanted. Therefore, it should be emphasized that it is an understandable situation of primarily the concept of media literacy is continuously mentioned with critical media theories.

In Turkey, when we consider the methods of which media literacy course in secondary education is being taught, it can be seen that the information which is given is the adoption of enforcing the settled values, protecting and preventing children. As Binark and Bek stated, the course is not being fed by critical pedagogy as an extension of the dominant political culture in Turkey as well; it does not bring together the percept of participatory and responsible citizen with media literacy; that it is reducing the use of media through with the high viewing time and strong influences of media to the effect paradigm and the syllabus has been developed with a mentality of protectionist/preventer for the course (Binark and Bek, 2010: 11). Therefore, it should be stated that however the media literacy course in general needs a critical perspective; the media literary course in Turkey needs a critical approach at the same rate.

It may be said that, although it has been stated that media literacy course will be taught with a student-based approach, the education system in Turkey is actually teacher-based. Therefore, it will not be wrong to state that Media Literacy Teacher's Guide Book, in which the communication, the mass media, the media, the television, the radio, the newspaper and the internet are taught in a technical language (as not tools of which messages are

edited, framed with ideology or dominant values but as tools which only convey messages), provides important data about media literacy in secondary education. Considering the topics in the book and the methods they are taught; it is concentrated on the communication, the definitions, the features and functions of mass media and media, instead of the effects of media which is emphasized more often in critical media literacy. Although it is emphasized that it is aimed for students to gain the ability to look critically at the media contents in some of the texts of the book with the media literacy course, it can be said that there is not a description of media intended for this aim in the section related to media of this book. In the book, in which the media, which is described in main stream communication studies, is highlighted; the media, which is featured with its functions, which stays on equal terms to social power centers, which controls them on behalf of the public as “the fourth force”, rather than a media which has contents framed with the ideological and dominant values. However, due to the nature of media literacy course, it can be expressed that it is in the situation of describing the media that is described in critical communication theory. Because it is known that one of the main objectives of the course is to gain the individual the ability to be conscious, knowledgeable and have critical perspective against media messages. The ability to look critically can be by approaching media critically. Therefore, the media, of which the messages it transfer and its reality are reconstructed with a particular worldview by professionals of media, must be described; but not a media which transfers its messages and reality in an impartial way within the course.

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AÇIK VE UZAKTAN EĞİTİMİN BÖLGESEL KALKINMAYA ETKİSİ

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ÖZET

İnsana yapılan en önemli yatırım eğitimidir. İnsanların yetenek ve becerilerinin eğitim yoluyla artırılması sadece bireylerin gelişmişliklerini değil, ülkelerin ve bölgelerinde gelişmişliklerini ve kalkınmalarını olumlu yönde etkilemektedir. Bu bağlamda, özellikle gelişmekte olan ülkelerin ülke ve bölge temelinde beşeri sermaye birikimini artırmaya yönelik eğitim yatırımları, ekonomik büyüme ve yapısal değişimin gerçekleştirilmesi açısından önemli bir etkiye sahiptir. İktisat literatüründe teorik ve ampirik pek çok çalışmada ekonomik kalkınma, büyüme ve eğitim arasında karşılıklı ilişkinin önemi üzerinde durulmaktadır. Günümüzde sıkça vurgulandığı gibi eğitilmiş işgücü; ekonomik büyümeyi, kalkınmayı, insani gelişmeyi olumlu etkileyerek, yoksulluğu azaltmada etkili olan en önemli beşeri sermaye unsurudur Eğitim, özellikle de mesleki eğitimde açık ve uzaktan eğitim, bireyin beşeri sermayelerini artıracak en önemli araçlardan biri olarak görülmektedir. Bu bağlamda eğitimin hem örgün hem de yaygın öğretim kurumlarınca sağlanması, bireyin niteliklerini artırmada ve ülkelerin beşeri sermaye birikiminde ve kalkınmışlıklarında önemli ölçüde etkilidir.

Eğitimin, özellikle açık ve uzaktan eğitimin bölgesel kalkınmadaki yeri ve önemini vurgulayan bu çalışmada, eğitimin bölgesel kalkınma üzerindeki etkisi hem genel olarak hem de Anadolu Üniversitesi Açık ve Uzaktan Eğitim sisteminin katkısı kapsamında incelenmesi amaçlanmaktadır. Bu amaçla, ilk adım olarak Türkiye’de bölgelerin sosyo-ekonomik gelişmişlik düzeyleri, üzerinde durularak bölgelerin mevcut durumları analiz edilmeye çalışılacaktır. İkinci adımda ise, Anadolu Üniversitesi Açık ve Uzaktan Eğitim Sisteminden yararlanan bireylere ilişkin demografik (yaş ve cinsiyet) özellikleri ve sisteme katıldıkları bölgeler genelinde değerlendirme yapılacaktır. Bu değerlendirme sonrasında ise, açık ve uzaktan eğitimin Türkiye genelinde coğrafi bölgelerin kalkınmışlık düzeyi üzerindeki etkisi vurgulanacaktır.

- **Anahtar Kelimeler:** Eğitim, Açık ve Uzaktan Eğitim, Beşeri Sermaye, Bölgesel Kalkınma.
- **THE EFFECTS OF OPEN AND DISTANCE EDUCATION ON REGIONAL DEVELOPMENT**

The most important investment for mankind is education. Increasing skills and abilities by education does not only improve people but also improve countries and regions by nourishing the development and the progress. In this context, especially for underdeveloped countries, increasing their human capital level by investing in education is of high importance in terms of achieving economics growth and structural change. The trilateral interaction among development, economic growth and education is an important issue in economics literature. As it is frequently emphasized today, educated workforce is one of the substantial human capital element which increases economic growth, development and reduces poverty. Education, more specifically open and distance learning platforms are considered as one of the most important tools that increase human capital. Hence, both formal and non-formal education are highly effective tools for increasing people's and countries' human capital and development levels.

This study aims to emphasize the importance of open and distance education for regional development by both general perspective and the perspective of Anadolu University Open and Distance Learning Programs. For the purpose, as a first step, socioeconomic development levels are studied. Second step is to specify and interpret demographic characteristics (age and gender) and participation areas about people in Anadolu University Open and Distance Learning System. After those steps the effects of open and distance learning on regional development levels will be put.

Keywords: Education, Open and Distance Learning, Human Capital, Regional Development

1.Giriş

Bölgesel Kalkınmada Açık ve Uzaktan Eğitim: Kavramsal Çerçeve ve Literatür

Küreselleşme hareketleri ve değişen ve yenilenen teknolojik gelişmeler bağlamında dünya ekonomilerinin büyüme ve kalkınma çabaları ve politikaları da değişmektedir. Bu değişim ve politikalar çerçevesinde ekonomilerin büyüme ve kalkınmaları için beşeri sermaye ve beşeri sermaye birikimi çok önemli olmaktadır. Beşeri sermaye ve beşeri sermaye birikimi için eğitim en önemli ihtiyaç olmaktadır. Eğitim öncelikle bireylerin verimliliğini artırırken daha önemlisi ekonomilerin ise beşeri sermaye birikimini artırarak ekonomik büyümeyi kalkınmayı, bölgesel kalkınmayı insani gelişmeyi olumlu etkileyerek yoksulluğu azaltarak ekonomik refahı da etkilemektedir.

Kalkınma literatüründe ekonomik kalkınmayı (gelişme) kavramsal olarak açıklayan ve detaylı bir şekilde analiz eden birçok çalışma bulunmaktadır. Sen (2004)'e göre ekonomik kalkınma, ekonomik büyümeden farklı olarak iktisadi faaliyetlerin ölçeğindeki artışın ötesinde, insanların iyi ve kaliteli bir hayat sürdürebilmeleri ile ilgili bir kavramdır. Bu bağlamda, insanların gelirlerin iyileşmesiyle birlikte, iyi bir yaşam içerisinde olmaları ise ancak uzun ve kaliteli bir yaşamla eğitim sağlık koşullarının iyileşmesiyle olanaklıdır. İnsanların yaşam koşullarının ve kalitesinin iyileşmesi ise bu koşullara özgürce elde edebilmelerine bağlı olmaktadır. Bu durumda kalkınmışlığın temel ölçütü ise bu koşullara sahip olma ve rahat bir şekilde ulaşabilmektir (Tüylüoğlu ve Çeştepe, 2008: 37).

Bu bağlamda Gürak (2000:33)'a göre yaşam standartındaki iyileşmeler ise teknolojik ilerleme ve bilgi birikimine bağlı olarak artan ve değişen verimlilik artışlarıyla çok yakından ilgili

olmaktadır. Verimlilik artışlarını etkileyen teknolojik yenilikler ve ilerlemelerin kaynağında bulunan unsur ise beşeri sermayedir. Beşeri sermaye ya da eğitilmiş hünerli verimli emek ise ancak eğitim ile mümkün olmaktadır. Bu durumda ekonomik ve bölgesel kalkınmada eğitim ve eğitim yatırımları düzeyi çok önemli olmaktadır (Öncel:1)

Ekonomilerin kalkınmasında, büyümesinde, insani gelişme göstergelerinin iyileşmesinde ve yoksulluğun azaltılmasında, beşeri sermaye ve eğitim ve eğitimle ilgili unsurların çok önemli ve farklı rolleri olduğunu ve bu rollere ilişkin kanıtları literatürdeki çeşitli teorik ve ampirik çalışmalarda görülmektedir. Literatürde özellikle Adam Smith ve Alfred Marshall'dan başlayarak eğitimin ekonomik ve sosyal faydaları ile birlikte bireylere ve toplumlara farklı yöndeki faydaları konusunda çeşitli çalışmalar vardır (Türkmen, 2002;vi). Teorik ve ampirik çalışmalarda eğitimin özellikle beşeri sermaye birikiminin büyüme ve kalkınma için ne kadar önemli olduğu konusunda çok çeşitli ve farklı türde çalışmalar bulunmaktadır.

İktisat biliminin babası olarak tanınan ve iktisadi büyüme konusunu analiz eden ilk ve önemli iktisatçılardan biri Adam Smith'dir. 1776 yılında yayımladığı, Milletlerin Zenginliğinin Doğası ve Nedenleri Üzerine Bir Değerlendirme adlı eserinde Smith büyüme konusundaki görüşlerini ve teorilerini açıklamıştır. Smith özellikle ekonomik büyümeyi açıklarken kullandığı en önemli faktörlerden birisi ise işbölümü ve uzmanlaşmadır (Berber, 2006; 57; Ünsal, 2007; 39-40-48; Taban, 2011; 27-28-31).

Smith, sermaye, işbölümü ve uzmanlaşmanın sürekli hasıla artışına neden olan faktörler olduğunu vurgulayarak, bu faktörlerin aynı zamanda büyüme ve kalkınmanın sürekliliği ve ülkelerin tam zenginlik aşamasına ulaşmasında da çok önemli işlevleri olduğunu belirtmektedir (Ünsal, 2007; 47; Taban, 2011;32). Bu bağlamda Smith, işbölümü ve uzmanlaşmanın emek verimliliği ve hasıla artışı yönünde etkisini vurgulayarak bu unsurların beşeri sermaye oluşumunda da çok önemli olduğunu Smith'den sonraki iktisatçılar da geliştirdikleri teori ve çalışmalarda açıklamışlardır.

Smith'den günümüze kadar ekonomik büyüme ve kalkınma teorilerinde sermaye nüfus, tasarruf, beşeri sermaye, teknolojik ilerleme, Ar-Ge, bilgi birikimi, kurumlar devlet, ekonomik büyümeyi belirleyen ve ekonomik kalkınmayı gerçekleştirilmesinde ise çok önemli unsurlardır. Bu unsurların ekonomik büyüme ve kalkınma konusundaki etkileri ve önemi ise farklı dönemlerde farklı büyüme ve kalkınma teorilerinde de sürekli analiz edilmiştir. Özellikle eğitim ve eğitim için yapılanlar ve yatırımlar beşeri sermaye birikimi için gerekli olan faaliyet ve yatırımlardır. Büyüme ve kalkınma teorilerinde beşeri sermayenin önemi tartışmasız olarak çok önemlidir. Bu önemi ise literatürde ekonomik büyüme ve kalkınma için beşeri sermayenin ve eğitimin önemi bağlamında beşeri sermaye eğitim ilişkisi Solow (1956), Schultz (1961), Denison (1962, 1967), Becker (1964), Denison (1964), Nelson ve Pelps (1966), Romer (1986), Lucas (1988), Barro ve Lee (1992), Rebelo (1992), Mankiw Romer ve Weil (1992), Barro ve Sala-i Martin'in (1995)'in çalışmalarında görülmektedir (Klasen, 2000: 2-3; Ünsal, 2007: 215-223; Berber, 2006: 179; Taban, 2011:120).

Schultz (1961), beşeri sermaye ekonomik büyüme ilişkisi bağlamında beşeri sermayenin oluşabilmesi için eğitim faaliyetlerinin ve eğitim yatırımlarının çok önemli olduğunu vurgulamaktadır (Schults, 1961:1-17). Diğer yandan Lucas (1988), beşeri sermayenin büyümenin uzun dönemde devamı için çok önemli olduğunu vurgulayarak, beşeri sermaye

tanımlamasında ise beşeri sermayeyi eğitim ile ilişkilendirerek açıklamaktadır. Bu bağlamda beşeri sermayeyi, eğitim almış, yetenekli, becerikli işgücü şeklinde tanımlamaktadır. Beşeri sermaye yatırımlarını ise işgücünün eğitim alabilmesi yetenekli, becerikli verimli ve üretken olabilmesi için yapılan her türlü yatırımlar olarak tanımlamaktadır (Berber, 2006: 179-180; Taban, 2010: 57). Beşeri sermaye yetenek, bilgi beceriyi kapsayan ve işgücünün niteliği artıran bir unsur olduğuna göre, ekonomik kalkınma ise bu bahsedilen unsurların birikimine bir başka deyişle beşeri sermaye birikimine bağlı olmaktadır.

Schweke (2004), başarılı ve zengin ülkelerin ekonomileri incelendiğinde, başarılarının altında mesleki bilgi ve beceri donanımına sahip eğitilmiş ve verimliliği yüksek işgücünden oluşan beşeri sermaye birikimini vurgulamaktadır. Beşeri sermayeye yapılan yatırımların işgücüne sağladığı bireysel kazançlar ve getiriler yanında, verimlilik artışı ekonomik ve sosyal kazançlar aracılığıyla, ekonomilerin ekonomik ve sosyal getirilerini de artırmaktadır (Grunewald ve Rolnick, 2007: 16).

Rolnick ve Grunewald (2003)'a göre eğitim yatırımlarının ve beşeri sermayenin, ekonomik getirilerinin yüksek olması ile ilgili ABD'nin Minnesota Eyaletini örnek vermektedir. Minnesota Eyaleti, ABD'nin en başarılı ekonomilerindendir. Bu bölgede 2000 yılında, 25 ve daha yukarısında yaşa sahip olan bireylerin yaklaşık üçte biri üniversite mezunudur. Bu özelliği ile yani eğitilmiş insan gücü ile Minnesota ABD'nin eğitim açısından en yüksek altıncı eyaleti ünvanını taşımaktadır. Bu bağlamda Minnesota Eyaleti eğitilmiş hünarlı verimli yüksek işgücüne sahip özelliği nedeniyle ve bu özelliğini sürdürülebilir olduğu takdirde gelecekteki ekonomik başarısı devam etmiş olacaktır (Rolnick ve Grunewald, 2003:7).

Eğitimin beşeri sermaye birikimine olan etkilerine ilave olarak Gökdemir (2003:392)'e göre, eğitimin sosyal, kültürel ve kurumsal yapılara ve bu yapıların işleyişinde de çok önemli etkileri olmaktadır. Özellikle iktisadi kalkınmayı engelleyen geleneksel ve kültürel yapıların değişmesinde eğitimin çok önemli işlevi bulunmaktadır. Eğitimin sağladığı gelişmeler ve katkılar şunlardır:

- Kaynakların daha etkin kullanımını sağlamak
- Geleneksel üretim yöntemleri yerine teknoloji kullanımını artıracak yeni üretim yöntemlerinin kullanımını sağlamak
- Beslenme, eğitim, sağlık, konut ve kültürel kaynaklı ihtiyaçlarının karşılanmasında kültür ve geleneklerin etkisini azaltarak tüketim kalıplarının modern koşullara uyumunu sağlamak
- Nüfus ilgili sorunları azaltarak, kadınların okur-yazarlık ve eğitime devam etmeleri konusunda iyileştirmeler gerçekleştirmek ve kadınların işgücüne ve iktisadi kalkınma sürecine katılmalarını sağlamak
- Tarımsal faaliyetlere destek olmakla birlikte sanayileşmenin teşvik edilmesine katkıda bulunmak
- Üretimde dışsallıkların artmasını neden olmak. Özellikle eğitim seviyesindeki artışlar üreticilerin gelirlerinin ve harcamalarının değişmesi sonucunda daha üretken ve verimli alanlara yatırımların artmasını sağlamak. Böylece artan üretim ve dışsallıklar diğer üreticilerin de üretim ve yatırımlarında artışlar sağlamak.

- Kırsal yoksulluk gelir dağılımı eşitsizliğini azaltmak, yaşam kalitesini yükseltmek ve ekonomik büyüme ve kalkınmayı artırmak (Öncel: 2).

Ekonomik büyüme ve ekonomik kalkınmada beşeri sermaye ve eğitimin önemi ile birlikte bölgesel kalkınma ve bölgesel kalkınma farklılıklarında ise beşeri sermaye ve eğitim önemli unsurlardandır. Beşeri sermaye birikiminde ise eğitim türü olarak yükseköğretim ve üniversiteler çok önemli roller üstlenmektedirler. Bu bağlamda yükseköğretim kurumları olarak üniversitelerin bölgesel kalkınmadaki işlev ve rolleri literatürde farklı yazarlar tarafından analiz edilmektedir. Jeffery (2001), Harvey (2004), Bansevicius ve Tolocka (1999), Seongoh (2000), Newlands (2003), Clayman ve Holbrook (2003), Chakrabarti ve Lester (2004), Vitaskova (2005), Shadbolt ve Kay (2005), Cooke ve Leydesdorff (2004), Peters (2004), Karlsen (2005)'in çalışmalarında, üniversite bölgesel kalkınma ilişkileri üzerinedir. Çalışmaların temelinde yükseköğretim kurumları olarak üniversitelerin bölgesel kalkınmadaki rolleri ve önemi belirtilmektedir (Çetin, 2007;218).

Premus vd. (2003)'e göre, üniversitelerin geleneksel olarak ulusal ve bölgesel ekonomiler üzerinde iki tane çok önemli rolleri bulunmaktadır. Birincisi, araştırma ve öğretim yoluyla bilgi ve beşeri sermayenin birikimini oluşturmak artırmaktır. İkinci rolleri ise, sanayi ve ekonomik büyümeye ve bu konudaki yeniliklere katkı yapmaktır. Son birkaç yılda, birçok üniversite bölgesel ekonomik kalkınmayı kendi misyonu olarak benimsemişlerdir. Bu misyon çerçevesinde üniversiteler üniversite-sanayi araştırma merkezleri, teknoloji geliştirme, araştırma destekleri ve bilgi üretmek için yapılan faaliyetlerde bulunmaktadırlar. (Premus vd., 2003: 369) Üniversitelerin geleneksel olarak yükseköğretim, bilgi üretmek ve araştırma yapmak gibi görev ve sorumluluklarını aşarak ekonomiye, topluma, bölgelere, yaşam kalitesine, ekonomik, sosyal kültürel yönlerden de çok önemli katkıları bulunmaktadır. Bu bağlamda yükseköğretim kurumu olarak üniversiteler ekonomilerin ve bölgelerin beşeri sermaye birikimini oluşturmakla kalmayıp bölgesel kalkınma sorunlarına da çözüm olabilecek nitelikte eğitim ve danışmanlık hizmetleri, yaşam boyu eğitimler, sosyal ve kültürel içerikli faaliyetlerde bulunmaktadır. Bu tür faaliyetler ise, bölgesel kalkınmayı özellikle ekonomik, sosyal ve kültürel açılardan doğrudan etkide bulunmaktadır (Yılmaz ve Şeker, 2011; 2787).

Gültekin vd., (2008: 266) ve Akçakanat vd.(2010: 166)'e göre bölgesel kalkınmanın önemli unsuru olarak üniversiteler bulundukları bölgeye ve ülkeye ekonomik, sosyal, kültürel ve pek çok alanlarda iyileştirmeler sağlamaktadır. Bu iyileştirmeler şunlardır:

- Bölgesel gelir ve istihdam ve bunlarla ilgili ekonomik faktörlerde iyileşme ve değişimi sağlamak,
- İletişim, sağlık, taşımacılık ve refah seviyesi ile ilgili sosyo-kültürel faktörlerde iyileşme ve değişimi sağlanmak
- Eğitime katılma ve sürekliliği ile ilgili oranlarda artış sağlamak ve göçlerin olumsuz yönlerini azaltarak demografik ve eğitim ile ilgili unsurlarda iyileşme ve değişimi sağlamak (Dalğar, 2009;42-43).

“Newlands (2003:1); üniversitelerin kendi bölgeleriyle olan ilişkisini harcama ve bilgi etkileri olmak üzere iki kısımda inceler. Cleary (2002:1-2) ve Jeffery (2001:2); üniversitelerin bölgesel kalkınma sürecinde anahtar bir rol oynadığını kabul etmekle birlikte, temel fonksiyonlarını aşağıdaki gibi sıralar:

- *Bölgesel bilgi ekonomisi ve toplumunun destekleyicisidir.*
- *Ekonomik istikrarın önemli bir unsurudur.*
- *Bölgenin sosyal yaşamının temel gücüdür.*
- *Kültürel kaynakların temelini oluşturur ve güçlendirir.*
- *Bölgenin uluslararası işbirliği ve dışa açılmasında etkilidir.*
- *Yenilikçi aktiviteler ve girişimciliğin temel kaynağıdır” (Çetin, 2007;219).*

Bleaney vd. (1992:305)’e göre üniversitelerin özellikle ülke ve bölge ekonomileri üzerindeki etkileri çok önemli boyuttadır. Üniversitelerin bölgesel kalkınma üzerindeki etkileri özellikle gelir, harcama ve istihdama olan katkıları bağlamında olmaktadır. Bu katkılar ise ülke ve bölge ekonomilerinin farklı birimlerini doğrudan ve dolaylı olarak etkilemektedir. Doğrudan etkiler genellikle bölgenin üretim faaliyetlerinin ve gelirlerinin artışı yönünde olmaktadır. Dolaylı etkiler ise beşeri sermaye birikimini sağlaması yoluyla oluşan dışsallıklar, bilim parkları faaliyetleri ve ekonomik, sosyal ve kültürel temelde oluşan dışsallıklardır (Bleaney vd., 1992:305)

Charles (2001: 8)’a göre üniversitelerin özellikle bölgesel kalkınma sürecinde önemli etkileri bulunmaktadır. Ekonomik, sosyal ve kültürel çerçevede ve bütün üretim faaliyetlerinde ve sektörlerde bilginin artan öneminden dolayı üniversitelerin bilgi üretme ve dağıtım konusundaki rolleri giderek artmaktadır. Özellikle Avrupa’da bilgi üretimi ve dağıtım konusunda geleneksel merkezlerden biri olmaları nedeniyle bölgesel kalkınma ile ilgili faaliyetleri ve bölgesel kalkınma sorunlarına yönelik katkıları ikincil amaçları olmaktadır (Charles, 2001; 8).

Kotosz (2013: 22-26)’a göre ise üniversitelerin bölgesel ekonomi üzerindeki etkileri çok geniş boyutlu olmakla birlikte genel ve ekonomik etkiler şeklinde özetlemektedir. Genel etkiler çoğunlukla politika, demokrasi, kültür, eğitim, sosyal olaylar, nüfus sağlık, trafik, sosyal güvenlik gibi alanlar olarak sıralanmaktadır. Ekonomik etkiler ise, gelir, harcama, istihdam, teknoloji, bilgi, beşeri sermaye, yatırım, fiyatlar, vergiler, ücretler gibi alanlar şeklinde sıralanmaktadır. Florax (1992), Garrido-Iserte ve Galoo-Rivera (1995), Dusek (2003), Pallenbarg (2005), Garrido-Iserte ve Gallo-Rivera (2010), Brown ve Heaney (1997), Johnson (1994), Bleaney vd. (1992) çalışmalarında üniversitelerin bölgesel ekonomi ve bölgesel kalkınmaya yönelik genel ve ekonomik etkilerini analiz etmişlerdir (Kotosz (2013: 22-26).

Atik (1999), Ergün (2003), Tuğcu (2003), Dulupçu ve Çarıkçı (2007), Kaşlı ve Serel (2008) Türkiye’de farklı bölgelerdeki üniversitelerin bölge ekonomisine ve bölgenin ekonomik kalkınmasına etkilerine yönelik farklı özellikteki araştırmalar yapmışlardır. Araştırmaların sonuçlarına göre, bölgedeki üniversiteler özellikle gelir, harcama, istihdam bağlamında önemli ekonomik katkılar sağlamışlardır (Dalğar vd., 2009: 41-42).

Literatürde eğitimin ekonomik ve sosyal faydalarının olduğunu vurgulayan pek çok çalışma bulunmaktadır. Wolfe ve Haveman (1994)’a göre bu faydalar ve bu faydalara yönelik araştırmalar şunlardır (Türkmen, 2002: 104):

- ✓ Bireysel olarak verimlilik artışları (Schultz, 196; Mincer 1962, Hansen 1963:Becker 1963; Conlisk 1971)
- ✓ Ücret dışındaki işgücüne kazandırılan statü ve yükselmeler (Duncan 1976; Lucas 1977; Freeman 1978; Smeeding1983)
- ✓ Aile içinde verimlilik artışları (Benham 1974)

- ✓ Aile eğitimi ve çocuk eğitimine sağlanan katkılar (Wachtel 1975; Murnane 1981; Sandefur, Mc Lanahan, and Wojtkiewicz 1989; Dawson 1991; Haveman, Wolfe and Spaulding 1991; Ribar 1993; Duncan 1994; Blau 1999; Clark 1992)
- ✓ Aile eğitiminin çocuk sağlığına sağladığı katkılar (Edwards ve Grossman 1979; Shakotko, Edwards ve Grossman 1981; Wolfe ve Behrman 1982; Grossman ve Joyce 1989; Strauss 1990; King and Hill 1993; Glewwe 1999; Lam and Duryea 1999)
- ✓ Aile eğitimi- Çocuk doğurganlığı (Antel 1988; Sandefur, Mc Lanahan 1990; Hayward, Grady ve Billy 1992; An, Haveman ve Wolfe 1993; Lam ve Duryea 1999)
- ✓ Eğitimin sağlık ve eş sağlığına sağladığı katkılar (Leigh 1981,1983; Kemna 1987; Berger and Leigh 1989; Grossman ve Joyce 1989; Kenkel 1991; Staruss Gertler 1993; Robins 1984; Auster, Leveson ve Sarachek 1969; Grossman 1975; Grossman ve Jacobitz 1981)
- ✓ Eğitim-Tüketici Seçimi Verimliliği (Michael 1972; Benham ve Benham 1975; Pauly 1980; Rizzo ve Zeckhauser 1992; Corman 1986)
- ✓ Eğitimin iş arama verimliliğine sağladığı katkılar (Metcalf 1973; Greenwood 1975; Da Vanzo 1983)
- ✓ Eğitim- Aile Büyüklüğü İlişkisi (Easterlin 1968; Ryder ve Westoff 1971; Michael ve Willis 1976; Rosenweig ve schultz 1989, King ve Hill 1993; Lam ve Duryea 1999)
- ✓ Eğitim-Tasarruf İlişkisi (Solomon 1975)
- ✓ Eğitim –Teknolojik Değişme İlişkisi (Nelson 1973; Mansfield 1982; Wozniak 1987)
- ✓ Eğitimin toplumsal birlik ve dayanışmaya sağladığı katkılar (Gintis 1971; Campbell 1976; Comer 1988)
- ✓ Eğitim- Gelir Tansferi Harcamaları (Kiefer 1985; Antel 1988; An, Haveman ve Wolfe 1993)
- ✓ Eğitim- Suç İlişkisi (Ehrlich 1975; Yamada, ve Kang 1991)
- ✓ Eğitimin çevre bilincine sağladığı katkılar (OECD 2000)

Açık ve uzaktan eğitim cinsiyet, yaş, gelir sosyo- ekonomik durum, bölge, ülke, sınıf ayırımı yapmadan, tüm insanlığa eğitim ve öğrenme fırsatı sunan bir eğitim türü olmaktadır (Faith, 1988: 5-8; Hakan, 1996: 1-167; Suğur ve Şavran, 2006: 197; Tekeli ve Günsoy, 2012: 3). Buradan anlıyoruz ki, açıktan ve uzaktan eğitimin her yaş ve cinsiyette ve her eğitim düzeyinde bireysel ve sosyo-ekonomik düzeyde çok önemli yararlı dışsallıkları olup, meslek edindirme nitelikli işgücünü oluşturma ve az gelişmiş ve yoksul ülkelerde ise yoksullukla mücadele etme konusunda da önemli etkileri olmaktadır.

Bukhsh (2007)'a göre, açıktan ve uzaktan eğitimin en önemli temel özellikleri şunlardır:

- Herkese açık ve ulaşabileceği bir eğitim olması
- Öğrencinin ve öğretmenin ayrı yerlerde ve ortamlarda olması
- Mekan ve zaman bağlamında özgürlüğün olması
- Bilgi iletişim ve teknolojinin kullanılması
- Öğrenciler ve öğretmenler için esnek öğrenme ve öğretme fırsatlarının olması
- Eğitim türlerinin hızlı artması ve teknolojik ilerlemeyle birlikte farklı boyutlardaki eğitim türlerinin de artması (Günsoy ve Günsoy, 2012: 28).

Daha önce de bahsedildiği gibi eğitimin sağlamış olduğu ekonomik ve sosyal faydalar ile ekonomik kalkınma ve bölgesel kalkınma için önemi daha iyi anlaşılmış olmaktadır. Özellikle açıktan ve uzaktan eğitim, eğitime ulaşma ve eğitimde fırsat eşitliğini sağlama ve nitelikli işgücünü oluşturma yönündeki en önemli özelliği ile ekonomik kalkınma ve bölgesel kalkınmadaki rolü ise tartışmasız çok önemli hale gelmektedir.

2. Türkiye’de Bölgelerin Sosyo-Ekonomik Gelişmişlik Düzeyleri

Küreselleşme ve ekonomik gelişme ile birlikte son dönemlerde ekonomik gelişmişliği ortaya koyabilmek amacıyla ulusal ve uluslararası düzeyde özel ve kamu kurumları çeşitli analizler yapılarak, farklı yöntem ve endeksler geliştirilmektedir. Bu amaçla, gelişmişlik durumu farklı düzeydeki ekonomik, kültürel, sosyal, demografik vb. kriterlerden yararlanılmaktadır^{*****}.

Türkiye’de ise, bölgelerin (illerin) sosyo-ekonomik gelişmişlik düzeylerinin ortaya konulmasında Kalkınma Bakanlığı’nın Sosyo-Ekonomik Gelişmişlik Sıralaması (SEGE) Araştırmalarının önemli katkısı olmaktadır. Bu araştırmalar, Türkiye’de bölgelerin (illerin) sosyo-ekonomik gelişme düzeylerini ortaya koymaktadır. Bu bağlamda, Devlet Planlama Teşkilatı’nca (Kalkınma Bakanlığı) bölgelerin sosyo-ekonomik gelişmişlik sıralaması (SEGE) 1996 yılında 76 il düzeyinde Temel Bileşenler Analizi (TBA) yöntemiyle yapılmıştır. Bu analizde, ekonomik ve sosyal göstergeler temelinde 58 adet gösterge kullanılmıştır. Ekonomik göstergeler; imalat sanayii, inşaat, tarım ve mali göstergelerden oluşurken; sosyal göstergeler ise, demografi, eğitim, sağlık, istihdam, altyapı ve diğer refah göstergelerinden oluşmaktadır. 2003 yılında gerçekleştirilen sosyo-ekonomik gelişmişlik düzeyi (SEGE) çalışmasında ise il sayısı artırılarak 81’e çıkarılmış ve iller gelişmişlik düzeyine göre beş kademeye ayrılmıştır. İlçeler düzeyinde benzer nitelikte bir başka çalışma ise 2004 yılında gerçekleştirilmiştir. Türkiye’de bölgelerin sosyo-ekonomik gelişmişlik düzeyine ilişkin son çalışma ise, 2011 yılında 81 il düzeyinde yeniden yapılmıştır. Çalışmada, hangi değişkenlerin kullanılacağı belirlenirken Dünya Bankası, OECD, Birleşmiş Milletler gibi uluslararası kuruluşlar tarafından oluşturulan endeksler ve veri setleri ile ülkemiz kamu kurum ve kuruluşları tarafından il bazında oluşturulan göstergeler analiz edilmiştir (Kalkınma Bakanlığı, 2013: 1-2).

Türkiye’de illerin ve bölgelerin gelişmişlik düzeyleri sınıflandırılırken farklı kademe düzeyleri dikkate alınmaktadır. İllerin gelişmişlik düzeyleri belirlenirken; 15.06.2012 tarihli Bakanlar Kurulu kararı ile yürürlüğe giren Yeni Teşvik Sistemi dikkate alınmakta ve buna göre illerin gelişmişlik düzeyleri altı kademede gösterilmektedir. Ancak, bölgelerin gelişmişlik düzeyleri gösteriminde ise 2002 yılında Bakanlar Kurulu kararı ile belirlenen İstatistiki Bölge Birimleri Sınıflandırması (İBBS) dikkate alınmakta ve buna göre de dört kademe gelişmişlik düzeyi çalışmalarda ve analizlerde kullanılmaktadır^{*****}. Türkiye’de bölgelerin (düzey-1, düzey-2

***** İktisat literatüründe ekonomik kalkınma ve ekonomik gelişme aynı anlamda kullanılmaktadır. Sosyo ekonomik gelişmişlik düzeyleri göstergeleri ve sıralamaları ise aynı zamanda ekonomik kalkınma düzeyleri göstergeleri ve sıralamalarıdır.

***** İllerin ve bölgelerin sosyo-ekonomik gelişmişlik düzey ve kademeler hakkında detaylı bilgi “Kalkınma Bakanlığı. (2013). İllerin ve Bölgelerin Sosyo-Ekonomik Gelişmişlik Sıralaması Araştırması (SEGE-2011), Bölgesel Gelişme ve Yapısal Uyum Genel Müdürlüğü, Ankara” dan elde edilebilir.

ve düzey-3 temelinde) sosyo-ekonomik gelişmişlik düzeyleri belirlenirken demografik göstergeler, istihdam göstergeleri, eğitim göstergeleri, sağlık göstergeleri, rekabetçi ve yenilikçi kapasite göstergeleri, mali göstergeler, erişilebilirlik göstergeleri ile yaşam kalitesi göstergeleri olmak üzere toplam 61 gösterge değeri kullanılmıştır (Kalkınma Bakanlığı, 2013: 21-23).

Bu çalışmada, 2002 yılında Bakanlar Kurulu kararlı ile tanımlanan “İstatistiki Bölge Birimleri Sınıflandırması (İBBS) kullanılmıştır. Bu kapsamda, Tablo 1, Düzey-1 ve Düzey-2 temelinde bölgelerin (illerin) sosyo-ekonomik gelişmişlik sıralamasını göstermektedir. Düzey-1 sınıflamasında İstanbul, Batı Marmara, Ege, Doğu Marmara, Batı Anadolu, Akdeniz, Orta Anadolu, Batı Karadeniz, Doğu Karadeniz, Kuzeydoğu Anadolu, Ortadoğu Anadolu ve Güneydoğu Anadolu’dan oluşan 12 bölge yer almaktadır. Düzey-2 sınıflamasında ise toplam 26 alt bölge yer almaktadır.

Tablo 1 ve Harita 1’e göre, İstanbul bölgesinde yer alan İstanbul, Batı Anadolu bölgesinde yer alan Ankara ve Ege bölgesinde yer alan İzmir sosyo-ekonomik gelişmişlik düzeyi en yüksek üç alt bölgedir. Bu bölgeleri Doğu Marmara bölgesinde yer alan Bursa alt bölgesi ve Akdeniz bölgesinde yer alan Antalya alt bölgesi izlemektedir. İstanbul, Ankara, İzmir, Kocaeli, Antalya ve Bursa, alt bölgeleri 1. Kademe gelişmişlik düzeyine sahip bölgeler arasında yer almaktadır.

Ele alınan dönem itibariyle sosyo-ekonomik gelişmişlik düzeyi bakımından 2. Kademe gelişmişlik düzeyinde yer alan alt bölgeler ise, Tekirdağ, Balıkesir, Manisa, Aydın, Adana, Zonguldak, Samsun, Konya ve Kayseri alt bölgeleridir.

3. kademe gelişmişlik düzeyinde yer alan alt bölgeler ise, Kastamonu, Kırıkkale, Hatay, Gaziantep, Malatya, Erzurum ve Trabzon alt bölgeleri yer alırken; 4. kademe gelişmişlik düzeyinde yer alan ve Türkiye’nin sosyo-ekonomik gelişmişlik düzeyi en düşük olan alt bölgeleri ise, Şanlıurfa, Mardin, Van ve Ağrı alt bölgeleridir.

Tablo 1: Türkiye’de Düzey-1, Düzey-2 ve Düzey-3 Bölgelerinin Sosyo-Ekonomik Gelişmişlik Sıralaması

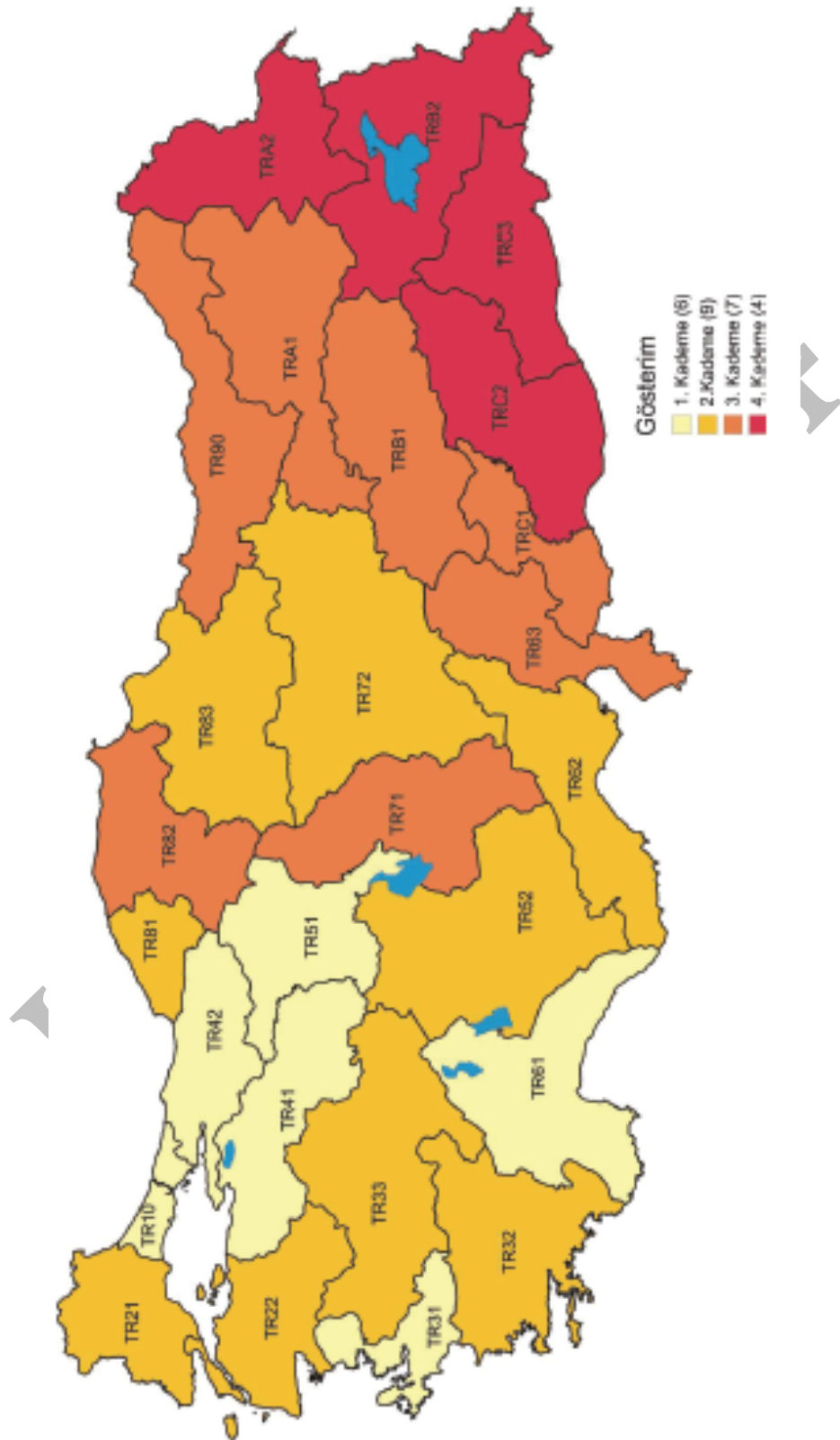
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Kod	Düzey 1	Kod	Düzey 2	Kod	Düzey 3	Gelişmişlik Sıralaması
TR1	İstanbul	TR10	İstanbul Alt Bölgesi	TR100	İstanbul	1
TR2	Batı Marmara	TR21	Tekirdağ Alt Bölgesi	TR211	Tekirdağ	9
		TR22	Balıkesir Alt Bölgesi	TR212	Edirne	12
				TR213	Kırklareli	15
TR3	Ege	TR31	İzmir Alt Bölgesi	TR221	Balıkesir	22
				TR222	Çanakkale	14
		TR32	Aydın Alt Bölgesi	TR310	İzmir	3
				TR321	Aydın	19
				TR322	Denizli	10
		TR33	Manisa Alt Bölgesi	TR323	Muğla	8
				TR331	Manisa	23
				TR332	Afyonkarahisar	43
TR333	Kütahya			38		
TR4	Doğu Marmara	TR41	Bursa Alt Bölgesi	TR334	Uşak	25
				TR411	Bursa	6
				TR412	Eskişehir	7
		TR42	Kocaeli Alt Bölgesi	TR413	Bilecik	27
				TR421	Kocaeli	4
				TR422	Sakarya	18
				TR423	Düzce	35
				TR424	Bolu	11
TR5	Batı Anadolu	TR425	Yalova	13		
		TR51	Ankara Alt Bölgesi	TR511	Ankara	2
		TR52	Konya Alt Bölgesi	TR521	Konya	20
TR6	Akdeniz	TR61	Antalya Alt Bölgesi	TR522	Karaman	32
				TR611	Antalya	5
				TR612	Isparta	21
		TR62	Adana Alt Bölgesi	TR613	Burdur	26
				TR621	Adana	16
		TR63	Hatay Alt Bölgesi	TR622	Mersin	24
				TR631	Hatay	46
				TR632	Kahramanmaraş	60
TR7	Orta Anadolu	TR71	Kırıkkale Alt Bölgesi	TR633	Osmaniye	53
				TR711	Kırıkkale	41
				TR712	Aksaray	55
				TR713	Niğde	56
				TR714	Nevşehir	36
		TR72	Kayseri Alt Bölgesi	TR715	Kırşehir	40
				TR721	Kayseri	17
				TR722	Sivas	49
TR8	Batı Karadeniz	TR81	Zonguldak Alt Bölgesi	TR723	Yozgat	65
				TR811	Zonguldak	29
				TR812	Karabük	28
		TR82	Kastamonu Alt Bölgesi	TR813	Bartın	48
				TR821	Kastamonu	47
				TR822	Çankırı	54
				TR823	Sinop	51
		TR83	Samsun Alt Bölgesi	TR831	Samsun	33
				TR832	Tokat	57
				TR833	Çorum	50
				TR834	Amasya	37
				TR901	Trbzon	31
TRA	Kuzeydoğu Anadolu	TRA1	Erzurum Alt Bölgesi	TR902	Ordu	61
				TR903	Giresun	52
				TR904	Rize	34
		TRA2	Ağrı Alt Bölgesi	TR905	Artvin	44
				TR906	Gümüşhane	62
				TRA11	Erzurum	59
				TRA12	Erzincan	45
TRB	Ortadoğu Anadolu	TRB1	Malatya Alt Bölgesi	TRA13	Bayburt	64
				TRA21	Ağrı	79
				TRA22	Kars	68
				TRA23	Iğdır	69
		TRB2	Van Alt Bölgesi	TRA24	Ardahan	71
				TRB11	Malatya	42
				TRB12	Eşaziğ	39
				TRB13	Bingöl	72
TRC	Güneydoğu Anadolu	TRC1	Gaziantep Alt Bölgesi	TRB14	Tunceli	58
				TRB21	Van	75
				TRB22	Muş	81
				TRB23	Bitlis	76
		TRC2	Şanlıurfa Alt Bölgesi	TRB24	Hakkari	80
				TRC11	Gaziantep	30
				TRC12	Adıyaman	66
				TRC13	Kilis	63
TRC3	Mardin Alt Bölgesi	TRC21	Şanlıurfa	73		
		TRC22	Diyarbakır	67		
		TRC31	Mardin	74		
		TRC32	Batman	70		
TRC	Güneydoğu Anadolu	TRC3	Mardin Alt Bölgesi	TRC33	Şırnak	78
				TRC34	Siirt	77

Kaynak: Kalkınma Bakanlığı. (2013). İllerin ve Bölgelerin Sosyo-Ekonomik Gelişmişlik Sıralaması Araştırması (SEGE-2011), Bölgesel Gelişme ve Yapısal Uyum Genel Müdürlüğü, Ankara, s.76'dan yararlanılarak tarafımızca düzenlenmiştir.

Harita 1: Türkiye’de Düzey-2 Bölgelerinin Dört Kademeli Sosyo-Ekonomik Gelişmişlik Düzeyi

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Kaynak: Kalkınma Bakanlığı. (2013). İllerin ve Bölgelerin Sosyo-Ekonomik Gelişmişlik Sıralaması Araştırması (SEGE-2011), Bölgesel Gelişme ve Yapısal Uyum Genel Müdürlüğü, Ankara, s.78.

Düzy-1, düzy-2 ve düzy-3 temelinde tablo 1 ve harita 1'e göre yaptığımız değerdendirmeleri tablo 2'de il bazında da görebilmek mümkündür. Daha önce de ifade edildiği üzere, İstanbul, Ankara, İzmir, Kocaeli, Antalya, Bursa, Eskişehir, Muğla, sosyo-ekonomik gelişmişlik endeksine göre, birinci kademe gelişmiş iller olarak en yüksek gelişmişlik düzeyine sahip illerdir. İkinci kademe gelişmiş iller ise Tekirdağ, Denizli, Bolu, Edirne, Yalova, Çanakkale, Kırklareli, Adana, Kayseri, Sakarya, Aydın, Konya ve Isparta olarak sıralanmaktadır. Üçüncü kademe gelişmiş iller, Balıkesir, Manisa, Mersin, Uşak, Burdur, Bilecik, Karabük, Zonguldak ve Gaziantep. Dördüncü kademe iller, Rize, Düzye, Nevşehir, Amasya, Kütahya, Elazığ. Beşinci kademe iller, Sinop, Giresun, Osmaniye, Çankırı, Aksaray. Altıncı kademe iller ise Diyarbakır, Kars, Iğdır, Batman Ardahan ve Bingöl'dür. Tablo 2'ye göre, endeks değeri 1 ve 1'in üzerinde yer alan alt bölgelerde sosyo ekonomik gelişmişlik düzeyinin yüksek; 1'in altında (1 ile -1 arasında) endeks değeri olan alt bölgelerin orta ve düşük sosyo-ekonomik gelişmişlik düzeyine sahip olduğunu söyleyebiliriz (Kalkınma Bakanlığı, 2013: 51-70).

Tablo 2: Türkiye'de Düzye-2 Bölgelerinin Sosyo-Ekonomik Gelişmişlik Endeks Değeri

Düzyey-2 Kodu	Bölge İlleri	Endeks Değeri	Sıra
TR10	İstanbul	4,5154	1
TR51	Ankara	2,8384	2
TR31	İzmir	1,9715	3
TR41	Bursa, Eskişehir, Bilecik	1,2667	4
TR61	Antalya, Isparta, Burdur	1,2305	5
TR42	Kocaeli, Sakarya, Düzce, Bolu, Yalova	1,0528	6
TR32	Aydın, Denizli, Muğla	0,8257	7
TR21	Tekirdağ, Edirne, Kırklareli	0,7736	8
TR62	Adana, Mersin	0,5211	9
TR22	Balıkesir, Çanakkale	0,5133	10
TR52	Konya, Karaman	0,4951	11
TR33	Manisa, Afyon, Kütahya, Uşak	0,2437	12
TR81	Zonguldak, Karabük, Bartın	0,1934	13
TR72	Kayseri, Sivas, Yozgat	0,1130	14
TR83	Samsun, Tokat, Çorum, Amasya	0,0000	15
TRC1	Gaziantep, Adıyaman, Kilis	-0,0547	16
TR90	Trabzon, Ordu, Giresun, Rize, Artvin, Gümüşhane	-0,0756	17
TR71	Kırıkkale, Aksaray, Niğde, Nevşehir, Kırşehir	-0,1248	18
TR82	Kastamonu, Çankırı, Sinop	-0,2190	19
TRB1	Malatya, Elazığ, Bingöl, Tunceli	-0,2448	20
TR63	Hatay, Kahramanmaraş, Osmaniye	-0,2729	21
TRA1	Erzurum, Erzincan, Bayburt	-0,3751	22
TRC2	Şanlıurfa, Diyarbakır	-1,1466	23
TRC3	Mardin, Batman, Şırnak, Siirt	-1,3284	24
TRA2	Ağrı, Kars, Iğdır, Ardahan	-1,3611	25
TRB2	Van, Muş, Bitlis, Hakkâri	-1,4927	26

Kaynak: Kalkınma Bakanlığı. (2013). İllerin ve Bölgelerin Sosyo-Ekonomik Gelişmişlik Sıralaması Araştırması (SEGE-2011), Bölgesel Gelişme ve Yapısal Uyum Genel Müdürlüğü, Ankara, s.74.

3.Araştırmanın Materyali ve Yöntemi

Amaç ve Önemi

Araştırmanın amacı, eğitimin bölgesel kalkınma üzerindeki Açık/Uzaktan Eğitim Sisteminin bölgesel kalkınmaya katkısı kapsamında incelemektir. Bu amaçla, bölgelerin (illerin) sosyo-

ekonomik gelişmişlik düzeyleri, Düzey-1, Düzey-2 ve Düzey-3 kapsamında bölgelerin (illerin) mevcut durumları analiz edilmeye çalışılmıştır. Sonrasında ise, Anadolu Üniversitesi Açık/Uzaktan Eğitim Sisteminden mezun olan bireylere ait demografik (yaş ve cinsiyet) özellikler ile mezunların bölgesel dağılımlarına ait veriler değerlendirilmiştir. Tüm bu değerlendirmeler sonrasında ise, açık ve uzaktan eğitimin Türkiye genelinde coğrafi bölgelerin kalkınmışlık düzeyi üzerindeki etkisi vurgulanacaktır.

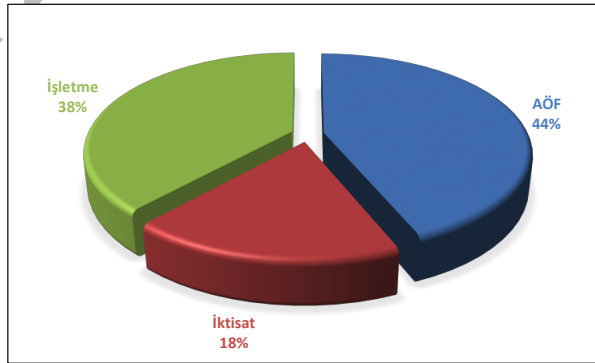
Yöntem

Çalışmada 1984-2013 dönemde Anadolu Üniversitesi Açıköğretim, İktisat ve İşletme Fakültelerine bağlı önlisans ve lisans programlarından mezun olanların cinsiyet, yaş, bölge açısından sınıflandırılması yapılarak, betimsel analiz yardımıyla cinsiyet, yaş, bölge ve temelinde ilişkiler incelenmiştir. Böylece bu veriler kapsamında, Anadolu Üniversitesi Açık/Uzaktan Eğitim Sisteminin Türkiye’de bölgelerin kalkınmışlık düzeyleri üzerindeki etkisi vurgulanmaya çalışılmıştır. Araştırmada kullanılan 1984-2013 dönemine ait veriler Anadolu Üniversitesi, Bilgisayarla Araştırma ve Uygulama Merkezi’nden elde edilmiştir.

Mezunların Bölgelere Göre Özellikleri

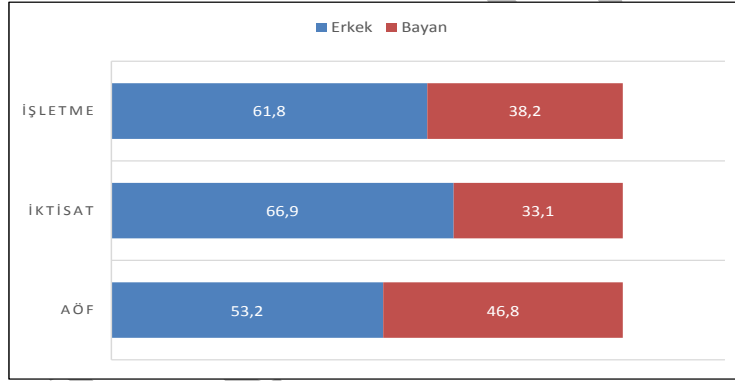
Türkiye’de Anadolu Üniversitesi Açık/Uzaktan Eğitim Sisteminin bölgesel kalkınma üzerindeki etkisi analiz edilirken 1984-2013 yılları arası lisans ve önlisans programları mezunlarının demografik özellikleri ve yaşadıkları bölgeler üzerinden incelemeler gerçekleştirilmiştir. Bu kapsamda değerlendirmeler sırasıyla lisans ve önlisans programları mezunları üzerinden program ayrımı gözetilmeksizin gerçekleştirilecektir.

Fakültelere Göre Dağılım: Anadolu Üniversitesi, Bilgisayarla Araştırma ve Uygulama Merkezi’nden elde edilen verilere göre, 1984-2013 öğretim yıllarında önlisans ve lisans programları olmak üzere toplam 1.590.840 öğrencinin mezun olduğu, bunlardan 670.281’nin kadın; 920.559’unun ise erkek olduğu belirlenmiştir. Bu rakamları yüzde olarak değerlendirdiğimizde açık ve uzaktan eğitimden mezun olanların yaklaşık yüzde %59’unu erkekler; %43’ünü ise kadınlar oluşturmaktadır. Mezunların fakültelere göre dağılımları şekil 1’de gösterilmektedir. Buna göre, mezunların %44’ünün Açıköğretim Fakültesi (AÖF)’ne bağlı programlardan; %38’inin İşletme Fakültesi’ne bağlı programlardan ve %18’inin ise İktisat Fakültesi’ne bağlı programlardan mezun olduklarını belirtmek mümkündür.



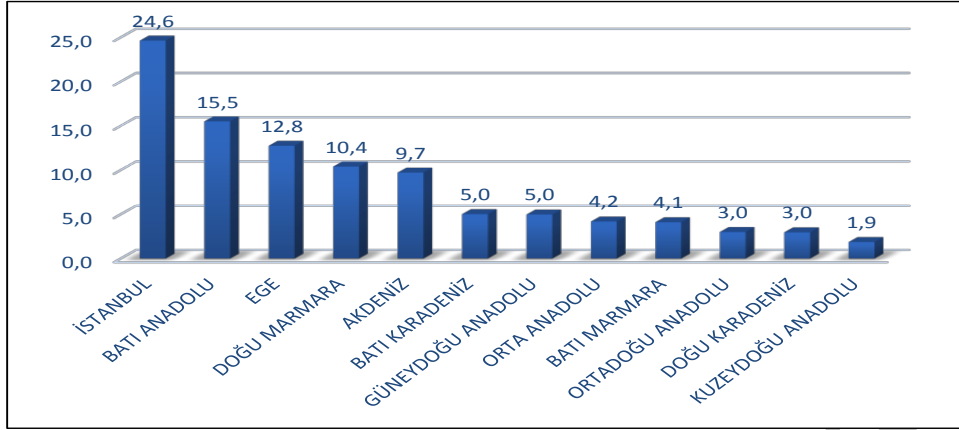
Şekil 1: Fakültelere Göre Toplam Mezun Sayıları (1984-2013)(%)

Fakültelere göre mezunların cinsiyet dağılımını ise aşağıdaki şekil 2 yardımıyla incelemek mümkündür. Buna göre, AÖF'e bağlı programlardan mezun olanların yaklaşık olarak %53'ünü kadınlar oluştururken; erkeklerin payı ise yaklaşık olarak %49'dur. İşletme ve İktisat Fakültelerine bağlı programlar açısından değerlendirildiğinde ise, bu programlardan mezun olan erkeklerin oranının, kadınların oranından daha yüksek söylemek mümkündür. İşletme Fakültesi'ne bağlı programlardan mezun olan kadınların toplam mezunlar içindeki payı yaklaşık olarak sadece %38 iken; erkeklerin payı ise %62 gibi oldukça yüksek bir orandadır. Benzer olarak, İktisat Fakültesi'nden mezun olan kadınların toplam mezun içindeki payı %33 iken, erkeklerin payı ise %67'dir. AÖF'e bağlı programlardan mezun olan kadınların toplam mezunlar içindeki payının diğer fakülte mezunu kadınlardan daha yüksek olmasının sebebini, AÖF'e bağlı programların çoğunluğunun iki yıllık öğretim dönemini kapsaması ve kadınların daha kısa süre içerisinde yükseköğretim eğitimi alarak, daha hızlı işgücü piyasasına katılma isteğinden kaynaklanabilir. Şekil 2'ye göre ifade edilebilecek bir başka sonuç ise, eğitim süresi uzadıkça kadınların yükseköğretime katılma ve yükseköğretimden mezun olma paylarının azalmaya başlamasıdır.



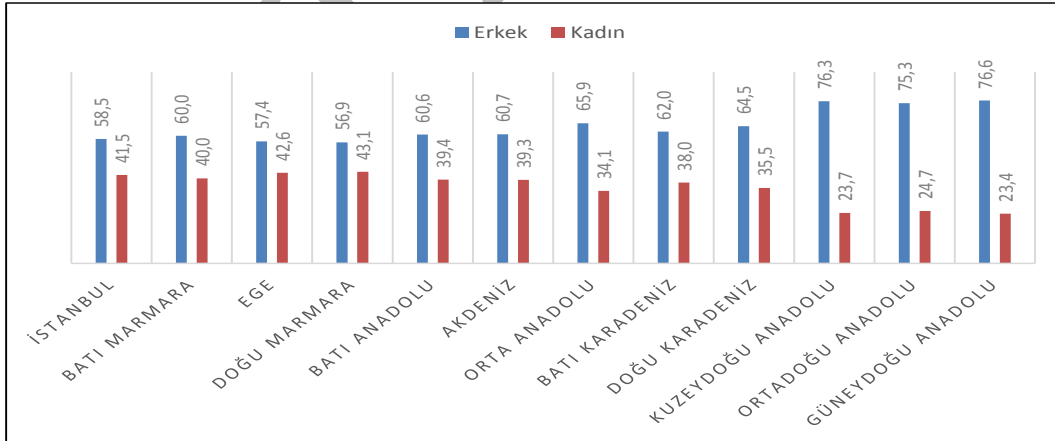
Şekil 2: Fakültelere Göre Mezunların Cinsiyet Dağılımı (1984-2013)(%)

Bölgelere Göre Dağılım: AÖF, İşletme ve İktisat Fakültelerinde 1984-2013 döneminde mezun olanların bölgelere göre dağılımları lisans ve önlisans programları olarak ayrı ayrı ele alınacaktır. Lisans programlarından mezun olanların bölgelere göre dağılımlarını şekil 3 üzerinden incelemek mümkündür. Buna göre, lisans programlarından mezun olanların çoğunluğu (%24,6'sı) İstanbul bölgesinde yer almaktadır. Bunu %15,5 oranıyla Batı Anadolu bölgesi ile %12,8 oranı ile Ege bölgesi izlemektedir. Mezuniyetin en az olduğu bölgeler ise %3 oranı ile Ortadoğu Anadolu ve Doğu Karadeniz bölgeleri ile %1,9 oranı ile Kuzeydoğu Anadolu bölgesidir.



Şekil 3: Lisans Mezunlarının Bölgelere Göre Dağılımı (1984-2013)(%)

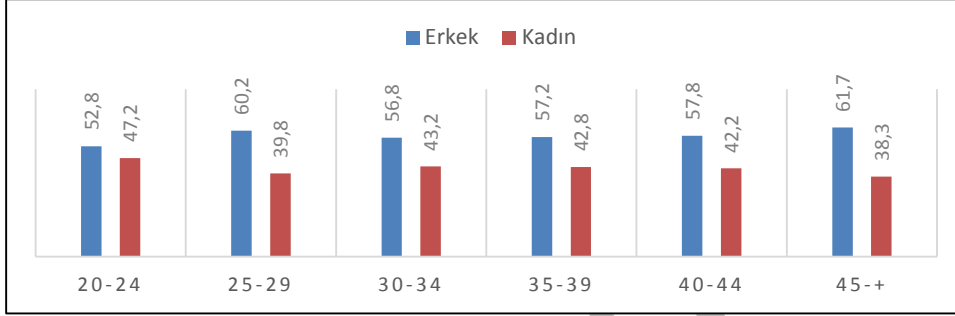
Lisans mezunları açısından bölgelerde yer alan mezunların cinsiyete göre dağılımlarını ise şekil 4 üzerinden inceleyebiliriz. Buna göre, tüm bölgeler için elde edilen ortak bulgu, erkek mezun sayısının kadın mezun sayısından daha fazla olduğu yönündedir. Özellikle Türkiye'nin doğu bölgelerine doğru gidildiğinde cinsiyetler arasındaki farkın daha fazla açıldığı, erkek mezun oranının kadınların neredeyse üç katı olduğunu söyleyebiliriz. Örneğin, Güneydoğu Anadolu bölgesinde lisans mezunlarının yaklaşık olarak %77'sini erkekler oluştururken; kadınların payı sadece %23'tür. Benzer sonuçları Ortadoğu Anadolu bölgesi ile Kuzeydoğu Anadolu bölgesi için de söylemek mümkündür. Ancak, ülkenin batısına yaklaştıkça bu durum biraz dengelenmekte, lisans mezunları arasında kadınların payı önemli ölçüde artmaktadır. Örneğin İstanbul bölgesinde lisans mezunu erkeklerin payı yaklaşık olarak %59 iken; kadınların payı ise %42 ile oldukça yüksektir. Bunu Batı Marmara, Ege ve Doğu Marmara bölgeleri takip etmektedir.



Şekil 4: Lisans Mezunlarının Cinsiyete ve Bölgelere Göre Dağılımı (1984-2013)(%)

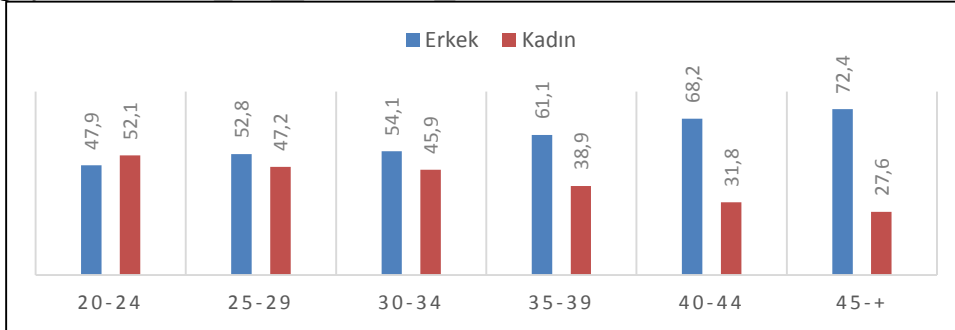
Lisans mezunlarının bölgesel dağılımlarında üzerinde durulması gereken bir başka ayrım ise, her bir bölge özelinde mezunların yaş ve cinsiyete göre dağılımlarıdır. Hatırlanacağı üzere

yaşam boyu eğitim hipotezi kapsamında bölgesel kalkınmanın belirleyenlerinden biri de sürekli eğitim imkanına sahip olabilmektir. Şekil 5'i incelediğimizde, bölgesel gelişmişlik endeksi sıralamasında birinci sırada yer alan İstanbul bölgesi özelinde 45 yaş ve üzeri yaş grubunda yer alan özellikle erkek mezunların oranı (yaklaşık %62) kadın mezunlardan daha yüksektir. Erkek mezunlar için ikinci sırayı ise 25-29 yaş aralığındaki bireyler oluşturmaktadır. Kadın mezunlar açısından değerlendirdiğimizde ise durum biraz daha farklıdır. Buna göre, kadın mezunların çoğunluğunu (yaklaşık %47) 20-24 yaş aralığındaki bireyler oluştururken; 45 yaş ve üzeri yaş grubundakiler ise %38 oranıyla en düşük grubu oluşturmaktadır.



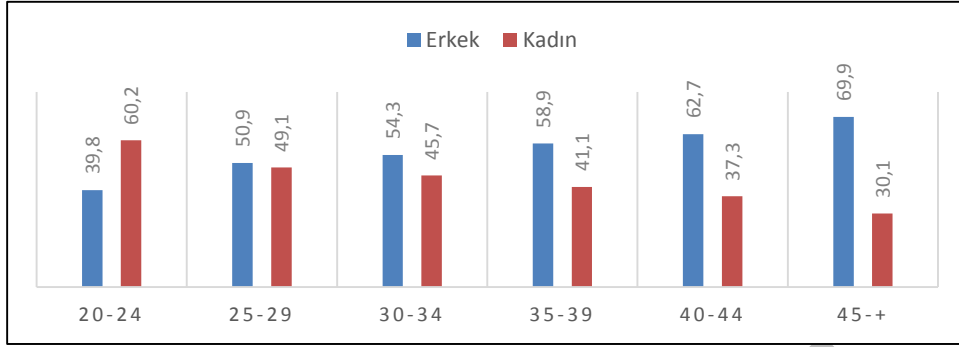
Şekil 5: İstanbul Bölgesi Lisans Mezunlarının Cinsiyete ve Yaşa Göre Dağılımı (1984-2013)(%)

Mezunların cinsiyet ve yaşa göre dağılımlarını Batı Marmara Bölgesi açısından da incelediğimizde durum farklılık göstermemektedir (Şekil 6). Batı Marmara bölgesinde de tüm yaş grupları için erkeklerin oransal ağırlığının kadınlardan daha yüksek olduğunu ifade edebiliriz. İstanbul Bölgesindeki sonuçlarla benzerlik olarak, 45 yaş ve üzeri yaş grubunda erkek mezunların oranı kadınlardan daha fazla iken, 20-24 yaş grubunda ise kadınların oranı erkekleri az da olsa geçmektedir.



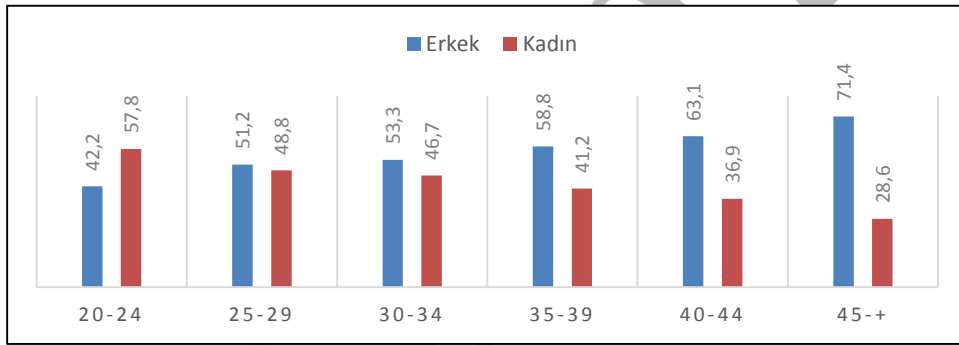
Şekil 6: Batı Marmara Bölgesi Lisans Mezunlarının Cinsiyete ve Yaşa Göre Dağılımı (1984-2013)(%)

Sosyo-ekonomik gelişmişlik düzeyi bakımından ilk üç sıralaması içerisinde yer alan Ege Bölgesinde mezun dağılımlarını şekil 7 üzerinden incelemek mümkündür. Buna göre, erkek mezunların çoğunluğunu (%69,9) 45 yaş ve üzeri yaş grubundaki bireyler oluştururken; kadın mezunların çoğunluğunu (%60,2) ise 20-24 yaş grubundaki bireyler oluşturmaktadır.



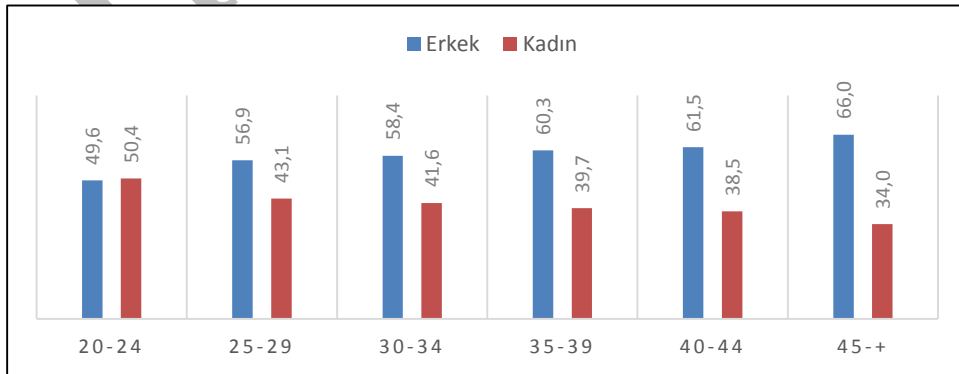
Şekil 7: Ege Bölgesi Lisans Mezunlarının Cinsiyete ve Yaşa Göre Dağılımı (1984-2013)(%)

Şekil 8'e göre, Doğu Marmara Bölgesinde 45 yaş ve üzeri yaş grubundaki erkek mezunların oranı (%71,4) iken; kadın mezunlarda ise (% 57,8) oranı 20-24 yaş grubunda yoğunluk artmaktadır.

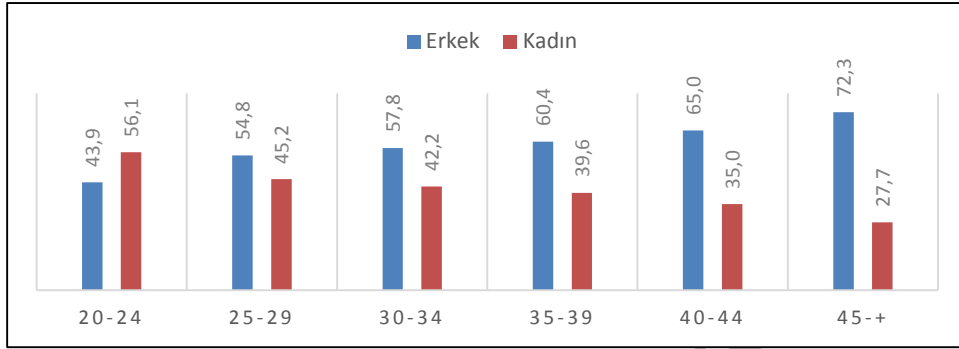


Şekil 8: Doğu Marmara Bölgesi Lisans Mezunlarının Cinsiyete ve Yaşa Göre Dağılımı (1984-2013)(%)

Batı Anadolu ve Akdeniz Bölgelerinde de mezunların yaşa göre dağılımları diğer bölgelerden farklılık göstermemektedir. Şekil 9 ve şekil 10'a göre, yaşın artmasıyla birlikte kadın mezun oranları önemli ölçüde azalırken; erkek mezun oranlarında artış gözlenmektedir.

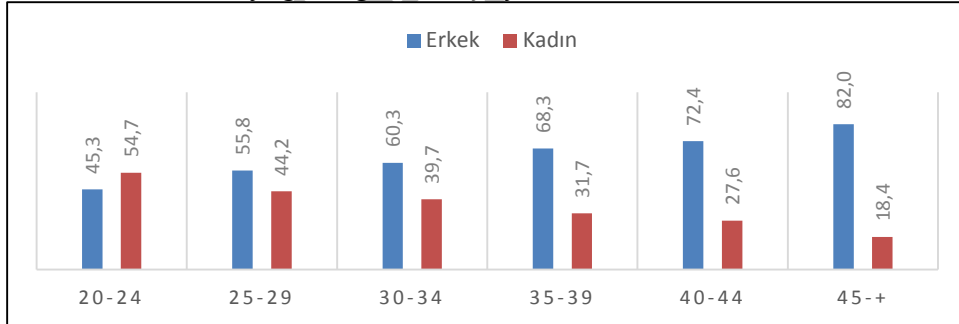


Şekil 9: Batı Anadolu Bölgesi Lisans Mezunlarının Cinsiyete ve Yaşa Göre Dağılımı (1984-2013)(%)

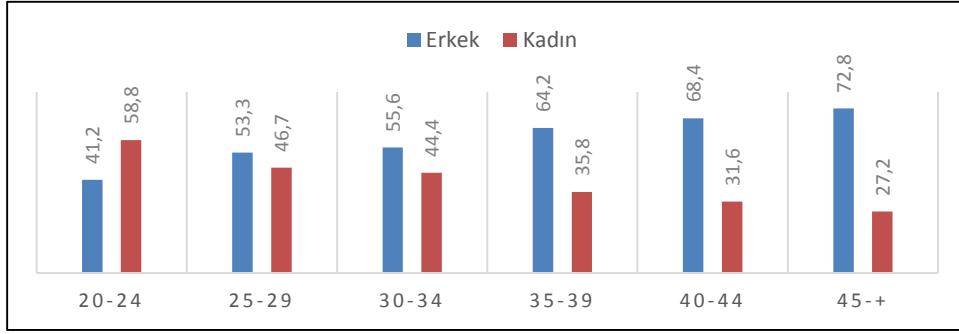


Şekil 10: Akdeniz Bölgesi Lisans Mezunlarının Cinsiyete ve Yaşa Göre Dağılımı (1984-2013)(%)

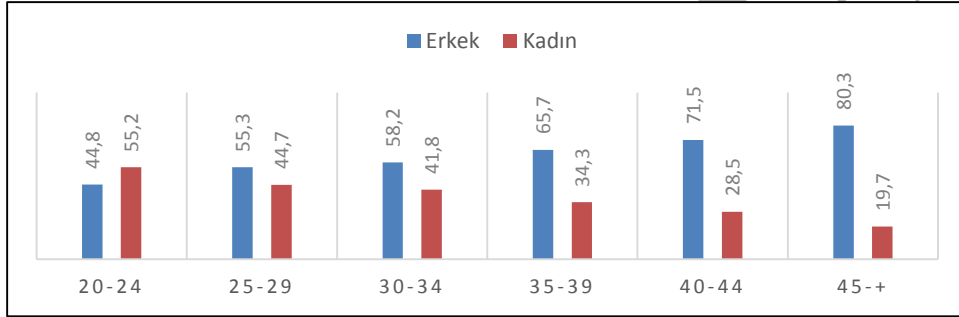
Orta Anadolu, Batı Karadeniz, Doğu Karadeniz, Kuzeydoğu Anadolu, Ortadoğu Anadolu ve Güneydoğu Anadolu Bölgelerinde ise kadın ve erkek mezunların yaşa göre dağılımlarında önemli ölçüde farklılık gözlenmektedir. Şekil 11- 16 arası incelendiğinde, erkek mezunların çoğunluğunun 45 yaş ve üzeri yaş grubundaki bireylerden oluştuğu görülebilir. Bu yaş grubundaki kadınların oranı ise oldukça düşüktür. Ancak genç yaş gruplarına baktığımızda ise, kadınların oranının biraz daha yüksek olduğunu söyleyebiliriz. Ancak, yine de her yaş grubundaki erkek mezunların yoğunluğu oldukça yüksektir.



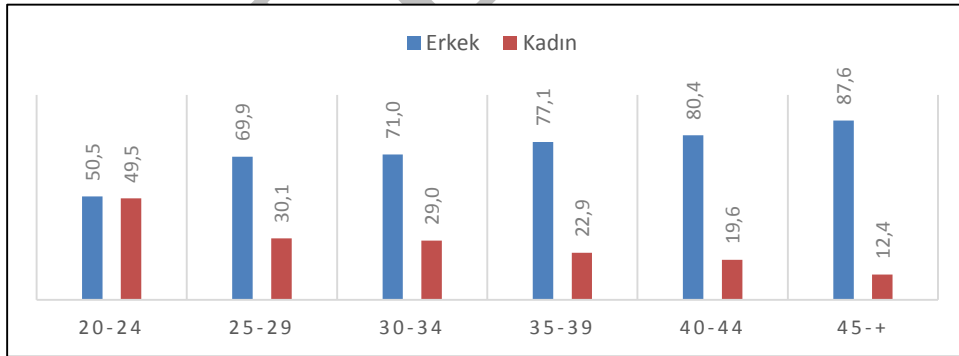
Şekil 11: Orta Anadolu Bölgesi Lisans Mezunlarının Cinsiyete ve Yaşa Göre Dağılımı (1984-2013)(%)



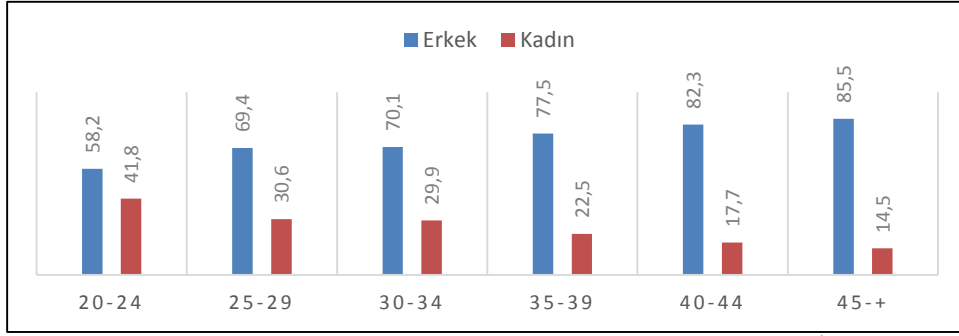
Şekil 12: Batı Karadeniz Bölgesi Lisans Mezunlarının Cinsiyete ve Yaşa Göre Dağılımı (1984-2013)(%)



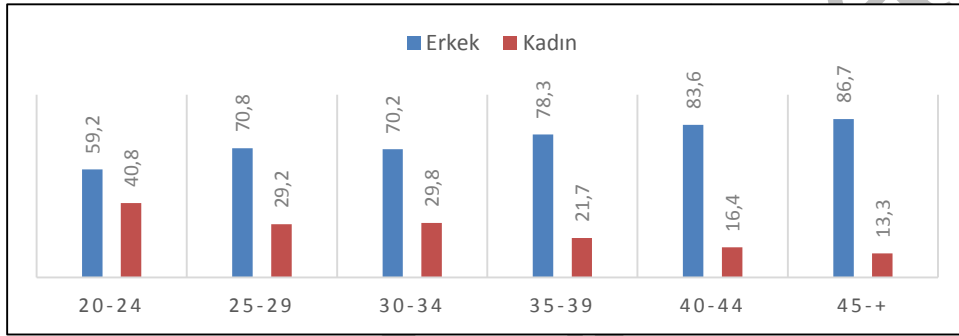
Şekil 13: Doğu Karadeniz Bölgesi Lisans Mezunlarının Cinsiyete ve Yaşa Göre Dağılımı (1984-2013)(%)



Şekil 14: Kuzeydoğu Anadolu Bölgesi Lisans Mezunlarının Cinsiyete ve Yaşa Göre Dağılımı (1984-2013)(%)

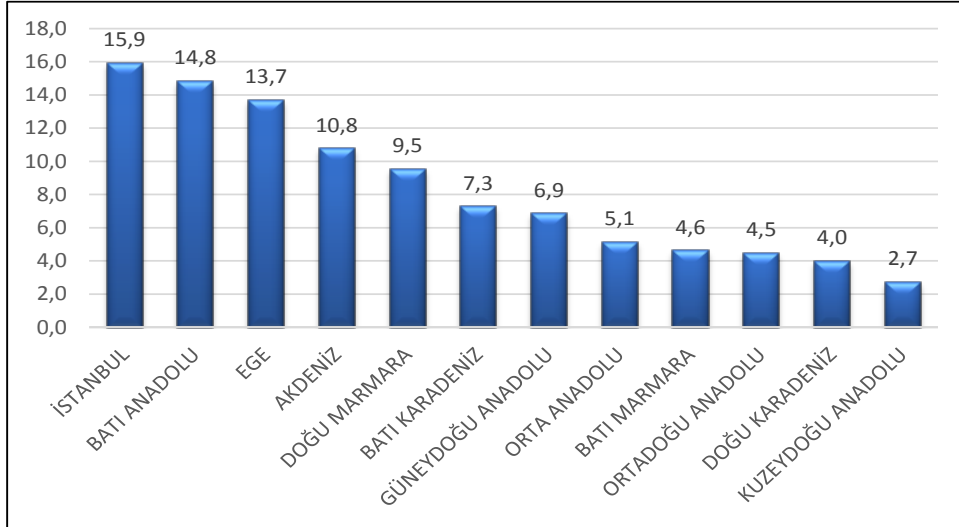


Şekil 15: Ortadoğu Anadolu Bölgesi Lisans Mezunlarının Cinsiyete ve Yaşa Göre Dağılımı (1984-2013)(%)



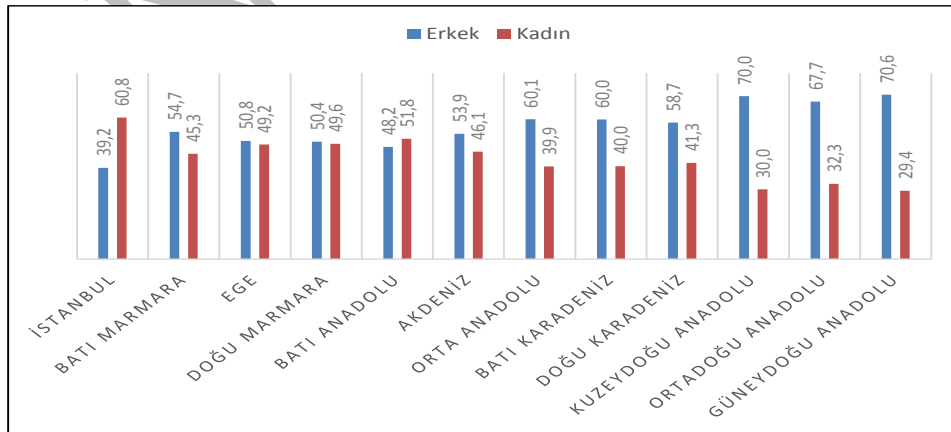
Şekil 16: Güneydoğu Anadolu Bölgesi Lisans Mezunlarının Cinsiyete ve Yaşa Göre Dağılımı (1984-2013)(%)

Lisans programlarından mezun olanların bölge, yaş ve cinsiyete göre dağılımlarını inceledikten sonra bütünü görebilmek için önlisans mezunlarındaki durumu incelemekte de yarar vardır. Şekil 17'e göre, önlisans programlarından mezun olanların çoğunluğu İstanbul bölgesi (%15,9), Batı Anadolu bölgesi (%14,8) ve Ege bölgesinde (%13,7) toplanmaktadır. Bunu %10,8 oranıyla Akdeniz bölgesi ile %9,5 oranı ile Doğu Marmara bölgesi izlemektedir. En az mezunun bulunduğu bölgeler ise %4 oranı ile Doğu Karadeniz ve %2,7 oranı ile Kuzeydoğu Anadolu bölgeleridir.



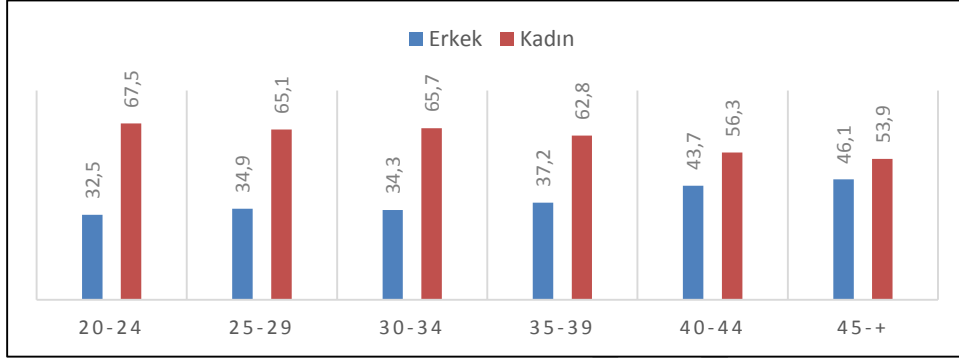
Şekil 17: Önlisans Mezunlarının Bölgelere Göre Dağılımı (1984-2013)(%)

Önlisans mezunları açısından bölgelerde yer alan mezunların cinsiyete göre dağılımlarını ise şekil 18 üzerinden inceleyebiliriz. Buna göre, İstanbul ve Batı Anadolu bölgeleri dışındaki bölgelerde erkek mezun oranı kadın mezun oranından daha fazladır. Özellikle Türkiye'nin doğu bölgelerine doğru gidildiğinde, lisans mezunlarında olduğu gibi, cinsiyetler arasındaki farkın daha fazla açıldığı, erkek mezun oranının kadınların neredeyse üç katı olduğunu söyleyebiliriz. Örneğin, Güneydoğu Anadolu bölgesinde önlisans mezunlarının yaklaşık olarak %71'ini erkekler oluştururken; kadınların payı sadece %29'dur. Benzer sonuçları Ortadoğu Anadolu bölgesi ile Kuzeydoğu Anadolu bölgesi için de söylemek mümkündür. Ancak, ülkenin batısına yaklaştıkça bu durum biraz dengelenmekte, lisans mezunları arasında kadınların payı önemli ölçüde artmaktadır. Örneğin İstanbul bölgesinde önlisans mezunu erkeklerin payı yaklaşık olarak %39 iken; kadınların payı ise %61 ile oldukça yüksektir. Bunu Batı Anadolu bölgesi takip etmektedir.



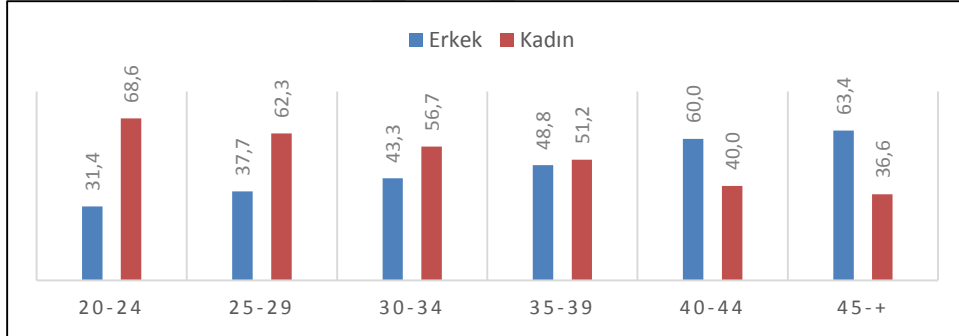
Şekil 18: Önlisans Mezunlarının Cinsiyete ve Bölgelere Göre Dağılımı (1984-2013)(%)

Lisans mezunlarında olduğu gibi önlisans mezunlarında da cinsiyet ve yaşa göre bölgesel dağılımlar üzerinde durulması gereken bir başka ayrımdır. Önlisans mezunlarına ait bulgular, lisans mezunlarından oldukça farklı olduğu görülmektedir. Örneğin, şekil 19 sosyo-ekonomik gelişmişlik sıralamasında 1.sırada yer alan İstanbul bölgesinde her yaş grubundaki kadın mezun sayısının erkek mezunlardan yüksek olduğu görülmektedir.

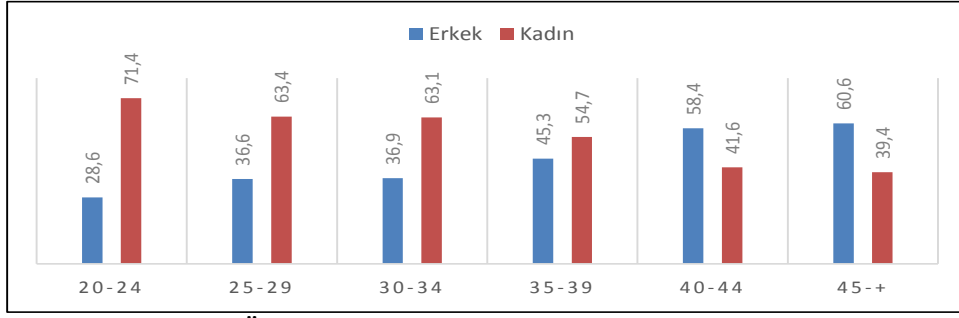


Şekil 19: İstanbul Bölgesi Önlisans Mezunlarının Cinsiyete ve Bölgelere Göre Dağılımı (1984-2013)(%)

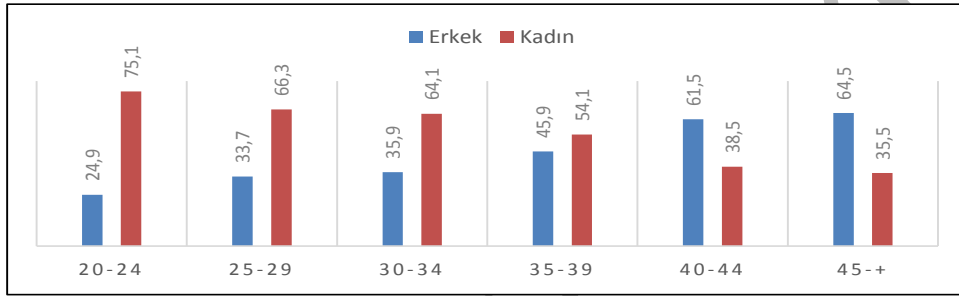
Şekil 20-24 yardımıyla Batı Marmara, Ege, Doğu Marmara, Batı Anadolu ve Akdeniz Bölgelerini incelediğimizde de benzer sonuçlar elde etmek mümkündür. Ancak İstanbul bölgesinden farklı olarak saydığımız bu bölgelerde özellikle 40 yaş ve üzeri yaş grubundaki mezunlarda erkeklerin oranı kadınların oranından daha büyüktür.



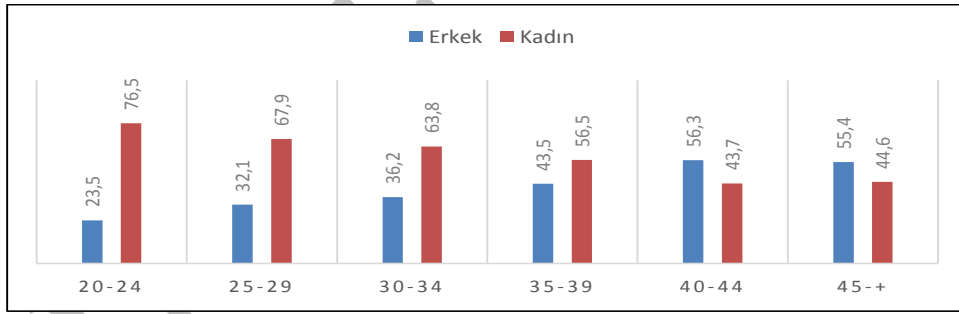
Şekil 20: Batı Marmara Bölgesi Önlisans Mezunlarının Cinsiyete ve Bölgelere Göre Dağılımı (1984-2013)(%)



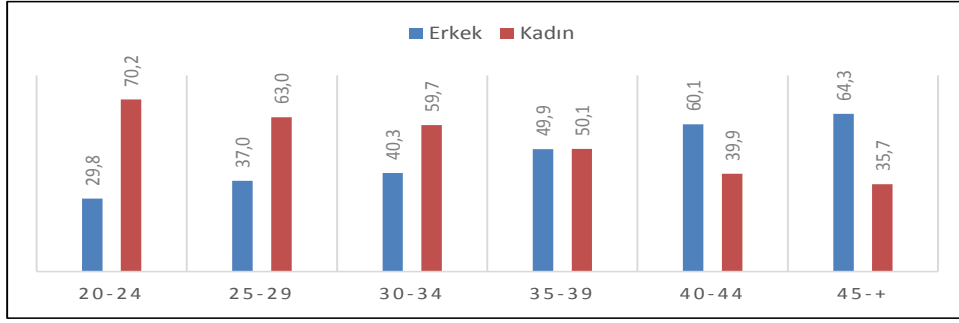
Şekil 21: Ege Bölgesi Önlisans Mezunlarının Cinsiyete ve Bölgelere Göre Dağılımı (1984-2013)(%)



Şekil 22: Doğu Marmara Bölgesi Önlisans Mezunlarının Cinsiyete ve Bölgelere Göre Dağılımı (1984-2013)(%)

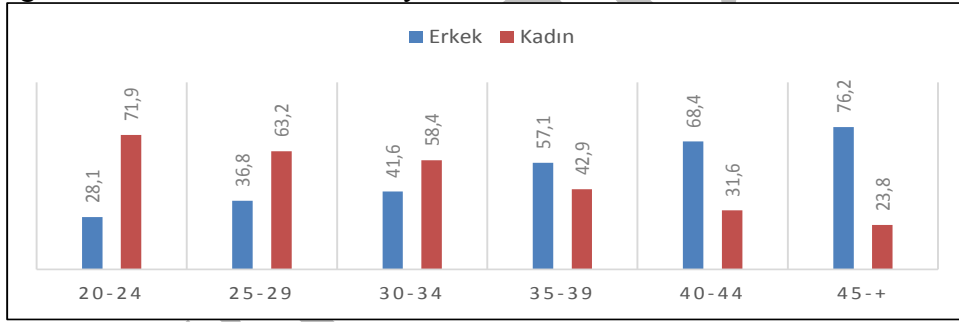


Şekil 23: Batı Anadolu Bölgesi Önlisans Mezunlarının Cinsiyete ve Bölgelere Göre Dağılımı (1984-2013)(%)

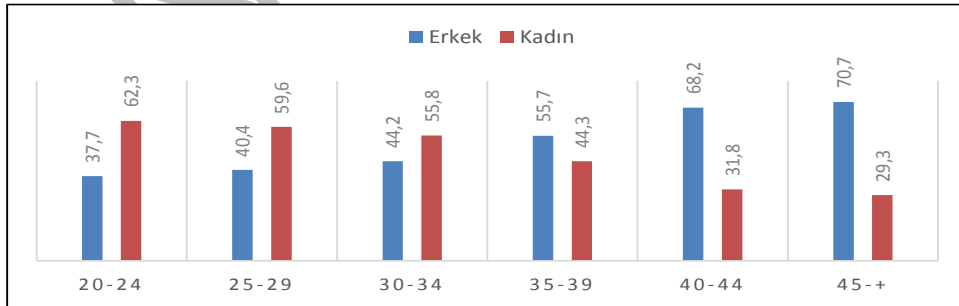


Şekil 24: Akdeniz Bölgesi Önlisans Mezunlarının Cinsiyete ve Bölgelere Göre Dağılımı (1984-2013)(%)

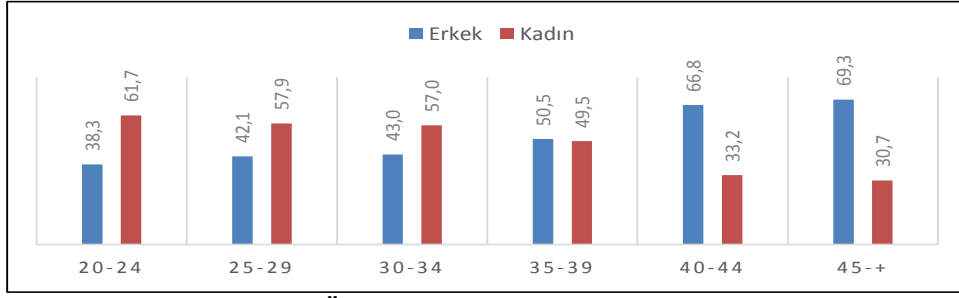
Orta Anadolu, Doğu Karadeniz, Batı Karadeniz, Kuzeydoğu Anadolu, Ortadoğu Anadolu ve Güneydoğu Anadolu bölgelerinde ise Şekil 25-30 aralığı incelendiğinde 35 yaş ve üzeri yaş grubundaki mezunlarda erkeklerin oranı kadınlardan daha yüksekken; 35 yaş altındaki mezun grubunda ise kadınların oranının erkeklerden daha yüksek olduğunu söyleyebiliriz. Buna göre, kadınların daha çok genç yaşlarda; erkeklerin ise geç yaşlarda eğitimlerini tamamlamak adına önlisans programlarını tercih ettiklerini söylemek mümkündür.



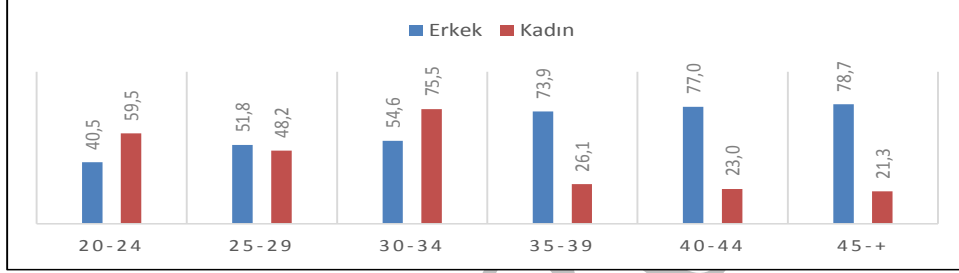
Şekil 25: Orta Anadolu Bölgesi Önlisans Mezunlarının Cinsiyete ve Bölgelere Göre Dağılımı (1984-2013)(%)



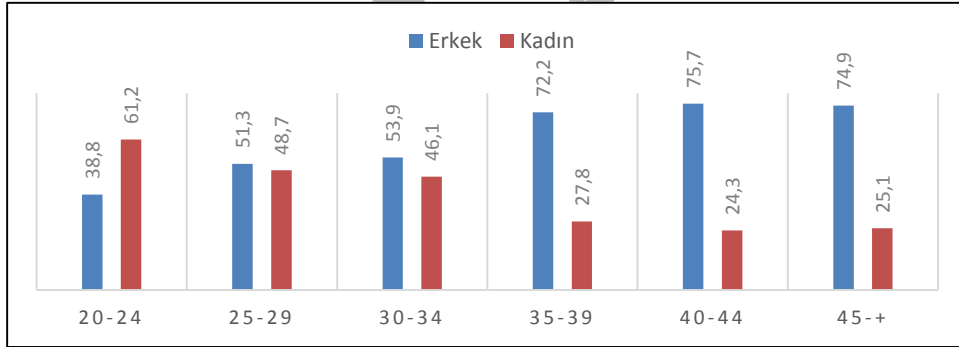
Şekil 26: Batı Karadeniz Bölgesi Önlisans Mezunlarının Cinsiyete ve Bölgelere Göre Dağılımı (1984-2013)(%)



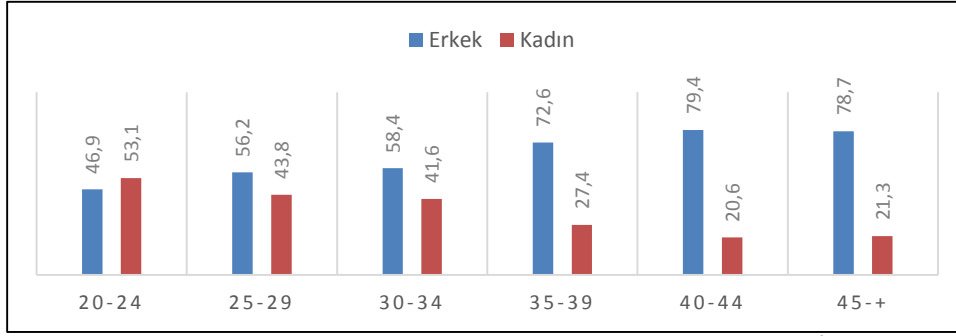
Şekil 27: Doğu Karadeniz Bölgesi Önlisans Mezunlarının Cinsiyete ve Bölgelere Göre Dağılımı (1984-2013)(%)



Şekil 28: Kuzeydoğu Anadolu Bölgesi Önlisans Mezunlarının Cinsiyete ve Bölgelere Göre Dağılımı (1984-2013)(%)



Şekil 29: Ortadoğu Anadolu Bölgesi Önlisans Mezunlarının Cinsiyete ve Bölgelere Göre Dağılımı (1984-2013)(%)



Şekil 30: Güneydoğu Anadolu Bölgesi Önlisans Mezunlarının Cinsiyete ve Bölgelere Göre Dağılımı (1984-2013)(%)

4. Araştırmanın Bulguları ve Değerlendirilmesi

Çalışmada, 1984-2013 yılları arası dönemde önlisans ve lisans programları olmak üzere toplam mezun sayısının 1.590.840 olduğu, mezunların 670.281'inin kadın; 920.559'nin ise erkek olduğu belirlenmiştir. Buna göre, ele alınan dönem itibarıyla açık ve uzaktan eğitimden mezun olanların yüzde %59'u erkek; %43'ü ise kadınlardan oluşmaktadır. AÖF'e bağlı bölümlerden mezun olanların yaklaşık %47'sini kadınlar oluştururken; erkeklerin payı ise yaklaşık olarak %53'tür. İktisat ve İşletme Fakültelerine bağlı programlar açısından değerlendirildiğinde ise, İşletme Fakültesi'ne bağlı programlardan mezun olan kadınların oranı sadece %38 iken; erkeklerin oranı ise %62 ile oldukça yüksektir. Benzer olarak, İktisat Fakültesi'nden mezun olan kadınların toplam mezun içindeki oranı da %33 iken, erkeklerin oranı ise %67'dir.

1984-2013 yılları arası dönemde lisans programlarından mezun olanların bölgelere göre dağılımlarında birinci sırayı İstanbul bölgesi (%24,6'sı) almaktadır. Batı Anadolu bölgesi %15,5 oranıyla ikinci sırada yer alırken; üçüncü sırayı ise %12,8 oranı ile Ege bölgesi izlemektedir. Mezuniyetin en az olduğu bölgeler ise sırasıyla Ortadoğu Anadolu ve Doğu Karadeniz bölgeleri (%3) ile Kuzeydoğu Anadolu bölgesidir (%1,9). Lisans programlarında olduğu gibi önlisans programlarından mezunların çoğunluğu İstanbul bölgesi (%15,9), Batı Anadolu bölgesi (%14,8) ve Ege bölgesinde (%13,7) toplanmaktadır. Bunu Akdeniz bölgesi (%10,8) ile Doğu Marmara bölgesi (%9,5) izlemektedir. En az mezunun bulunduğu bölgeler ise %4 oranı ile Doğu Karadeniz ve %2,7 oranı ile Kuzeydoğu Anadolu bölgeleridir.

Cinsiyet ve bölgelere göre lisans ve önlisans mezunlarının dağılımını incelediğimizde ise, tüm mezunlar açısından yaptığımız değerlendirmelerle benzer bulgular elde edilmiştir. Lisans mezunları açısından tüm bölgeler için elde edilen ortak bulgu, erkek mezun sayısının kadın mezun sayısından daha fazla olduğu yönündedir. Özellikle Türkiye'nin doğu bölgelerine doğru gidildiğinde erkek mezun oranı kadınların neredeyse üç katına kadar çıkmaktadır. Önlisans mezunları açısından değerlendirildiğinde ise İstanbul ve Batı Anadolu bölgeleri dışındaki bölgelerde erkek mezun oranı kadın mezun oranından daha fazladır. Özellikle Türkiye'nin doğu bölgelerine doğru gidildiğinde, lisans mezunlarında olduğu gibi, cinsiyetler arasındaki farkın daha fazla açıldığı, erkek mezun oranının kadınların neredeyse üç katı olduğunu söyleyebiliriz. Cinsiyet, yaş ve bölgelere göre mezun sayılarını değerlendirdiğimiz de ise, hem lisans hem de önlisans programları açısından ortak bulgular elde edilmiştir. Erkek mezunların çoğunluğu

özellikle Türkiye'nin doğu bölgelerinde 45 yaş ve üzeri yaş grubunda toplanırken; kadın mezunlar açısından ise daha genç yaş grubunda (20-24 yaş aralığında) yer aldıkları sonucuna ulaşılmıştır. Ülkenin batı bölgelerine doğru gidildiğinde ise, kadın mezunların oranı artış göstermektedir.

5. Sonuç ve Değerlendirme

Ekonomik ve bölgesel kalkınmanın sağlanmasında eğitilmiş nitelikli işgücü stoku çok önemli bir unsurdur. Bu bağlamda, eğitim ekonomik ve bölgesel kalkınma için bir zorunluluk olmakla birlikte; aynı zamanda bireysel ve sosyal açıdan daha yüksek yaşam kalitesi, düzenli geliri olan bir iş, sosyalleşme, kültürel zenginlik vb. faydalar da sağlamaktadır (Kalkınma Bakanlığı, 2013: 28). Bölgesel kalkınmada eğitim kurumları arasında özellikle üniversitelerin vermiş oldukları eğitimler öncelikle bölgelerin beşeri sermaye birikiminin oluşturulmasına ve geliştirilmesine büyük katkı sağlamaktadır. Ayrıca, üniversiteler eğitim ve danışmanlık hizmetleri sunarak bölgesel kalkınma sorunlarına da çözüm olabilecek nitelikte, yaşam boyu eğitimler, sosyal ve kültürel içerikli faaliyetlerde bulunmaktadır. Üniversitelerin eğitime sağladığı katkılarla bölgenin ekonomik ve sosyal açıdan gelişmesi sağlanmış olmaktadır.

Türkiye'de eğitimi yüksek öğretimi alanında açık ve uzaktan sunan ilk üniversite olması sebebiyle, Eskişehir Anadolu Üniversitesi Açıköğretim/İktisat/İşletme Fakülteleri eğitimin ulusal ve uluslararası sınırlamalar olmaksızın tüm bölge ve ülkelere ulaşmasını sağlamıştır. Anadolu Üniversitesi açık ve uzaktan öğretim sistemi bir buçuk milyondan fazla (1.590.840) mezun sayısı ile Türkiye'de bölgesel kalkınmanın sağlanmasında çok önemli olan eğitim göstergelerine ve beşeri sermaye oluşumuna yaptığı katkılarla önemli bir görev üstlenmektedir.

Çalışmada 1984-2013 yılları arası döneme ait mezunlara ait veriler kullanılarak, mezunların lisans ve önlisans programları açısından özellikle bölgesel dağılımları ve bölgeler özelinde mezunların demografik özellikleri (cinsiyet ve yaş) değerlendirildiğinde, lisans programlarından mezun olanların bölgelere göre dağılımlarında birinci sırayı İstanbul bölgesi almaktadır. Batı Anadolu bölgesi ikinci sırada yer alırken; üçüncü sırayı ise Ege bölgesi izlemektedir. Mezuniyetin en az olduğu bölgeler ise sırasıyla Ortadoğu Anadolu ve Doğu Karadeniz bölgeleri ile Kuzeydoğu Anadolu bölgesidir. Lisans programlarında olduğu gibi önlisans programlarından mezunların çoğunluğu İstanbul bölgesi, Batı Anadolu bölgesi ve Ege bölgesinde toplanmaktadır. Bunu Akdeniz bölgesi ile Doğu Marmara bölgesi izlemektedir. En az mezunun bulunduğu bölgeler ise ile Doğu Karadeniz ve oranı ile Kuzeydoğu Anadolu bölgeleridir. Kalkınma Bakanlığının illerin ve bölgelerin sosyo- ekonomik gelişmişlik düzeyine ilişkin 2013 yılında yaptığı çalışmada da belirtildiği üzere, sosyo-ekonomik açıdan en gelişmiş bölgeler İstanbul, Batı Anadolu ve Ege bölgesi iken; bu bölgeleri Doğu Marmara ve Akdeniz bölgeleri takip etmektedir. İl özelinde değerlendirdiğimizde ise, İstanbul, Ankara, İzmir, Kocaeli, Antalya, Bursa ve Eskişehir illeri gelişmişlik düzeyinde ilk sıralarda yer almaktadır. 2. Kademe gelişmişlik düzeyinde yer alan alt bölgeler ise, Tekirdağ, Balıkesir, Manisa, Aydın, Adana, Zonguldak, Samsun, Konya ve Kayseri alt bölgeleridir. 3. kademe gelişmişlik düzeyinde yer alan alt bölgeler ise, Kastamonu, Kırıkkale, Hatay, Gaziantep, Malatya, Erzurum ve Trabzon alt bölgeleri yer alırken; 4. kademe gelişmişlik düzeyinde yer alan ve Türkiye'nin sosyo-ekonomik gelişmişlik düzeyi en düşük olan alt bölgeleri ise, Şanlıurfa, Mardin, Van ve Ağrı alt

bölgeleridir. Diyarbakır, Kars, Iğdır, Batman Ardahan ve Bingöl, sosyo-ekonomik gelişme açısından en alt sırada yer alan illerdir. Bu kapsamda, Açık ve Uzaktan Eğitim Sisteminin mezunlarının bölgelere göre dağılımları da bölgelerin gelişmişlik düzeylerini destekler niteliktedir. Bir bölgenin sosyo-ekonomik gelişmişlik düzeyinin oluşturulmasında etkili olan eğitim göstergelerine Açık ve Uzaktan Eğitim Sistemi “*yüksek okul ve fakülte mezunu (22 + yaş nüfusa oranı)*” (Kalkınma Bakanlığı, 2013:28-29)” göstergesi açısından önemli katkı sağlamaktadır. Özellikle, Ankara, İzmir, İstanbul, Eskişehir, Çanakkale, Yalova, Isparta, Trabzon ve Erzincan illeri yüksekokul ve fakülte mezunlarının oranı bakımından ülke ortalamasının üzerindedir. Bu bağlamda, “yüksekokul veya fakülte mezunu nüfusun 22 ve üzeri yaş nüfusa oranı göstergesi itibarıyla Ankara, İzmir ve Eskişehir ilk üç sırada yer almaktadır. Bu üç ilin yanında İstanbul, Antalya ve Muğla’da bu oran yüzde 10’un üzerindedir. Ağrı, Muş ve Şanlıurfa yüzde 3 düzeyindeki oran ile son üç sırada yer almaktadır” (Kalkınma Bakanlığı, 2013-54-82).

Cinsiyet ve yaş özelinde mezunların bölgelere göre dağılımlarında hem lisans hem önlisans programlarından mezun olan erkeklerin oranı kadın mezunlardan yüksektir, özellikle ülkenin doğu bölgelerinde bu durum oldukça hissedilir düzeydedir. Yaş özelinde ise, mezun erkeklerde 45 yaş ve üzeri yaş grubu daha yüksekken; kadınlarda ise genç yaş grubunun oranı daha yüksektir. Türkiye’de açık ve uzaktan eğitim sisteminden yararlananların çoğunluğunu erkekler oluşturmaktadır. Toplumsal cinsiyet ayrımı, bölgesel eşitsizlikler, ekonomik ve sosyo-kültürel sınırlamalar, kadınların üniversite ve mesleki eğitime ulaşmasına ve eğitimden yararlanmasını engelleyen nedenlerdir. Bu nedenle, açık ve uzaktan eğitimin kadınların bu engelleri aşarak eğitime ulaşmasında önemli bir araç ve eğitim sistemi olduğunu söyleyebiliriz (Tekeli-Günsoy, 2012: 20).

Sonuç olarak Anadolu Üniversitesi, Açık ve Uzaktan Eğitim Sistemi kapsamında sunduğu eğitim hizmeti ile Türkiye’de bölgelerin tamamına eşit oranda ulaşmakta ve bölge nüfusunun önemli bir yüzdesinin yüksekokul ve üniversite eğitim ihtiyacını karşılamaktadır. Bölgesel kalkınmada önemli yeri olan eğitim fırsat eşitliğinin sağlanmasında Açık ve Uzaktan Eğitim Sisteminin önemi büyüktür. Diğer yandan sunduğu eğitim hizmeti sonucunda, Bukhsh (2007), Kotozs (2013), Bleaney vd.(1992), Premus vd. (2003), Faith (1998)’in çalışmalarında vurgulandığı gibi, bölgeye farklı açılardan katkıda bulunarak, bölgelerin beşeri sermaye birikimini sağlayarak bölgesel kalkınmada etkili olan bir eğitim sistemi olmaktadır. Türkiye genelinde özellikle eğitim bağlamında bölgesel gelişmişlik farklılıklarını azaltabilecek türde bölgesel kalkınma politikalarının oluşturulması önemli olmaktadır. Bu amaçla, açık ve uzaktan eğitimin yaygınlaştırılması ve eğitim yöntem ve materyallerinin geliştirilmesi ise politikalara katkı sağlayacak gelişmeler olacaktır.

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control their impulses and regulate their expressions of affection, in so far as an adolescent is characterized by a personality and cognitive functioning which is still partially infantile, though manifesting functioning modalities that approach those of an adult (Mancini, 2006). Adolescents will be able to overcome these difficulties when they can integrate their sexual desires and sexual representations of themselves in a renewed sense of personal identity, correlated with previous identifications. This process, often conflictual, heralds other changes, including the emergence of a new sexual identity, learning appropriate sexual behavior and re-elaborating family ties (Kestenberg, 1962).

In other words, pubertal modifications presumably represent a new evolutive organization (Spitz, 1958), that guides the adolescent towards achieving a definitive sexual organization, in which the content of sexual desires and oedipal identifications are integrated into an irreversible sexual identity (Laufer and Laufer, 1984). The sexual identity, more generally, is a dimension that includes “... *an individual's perception of his or her "qualities" in the sexual domain, that is, their perceptions regarding their sexual self.*” (Buzwell e Rosenthal, 1996, p. 490) and that shapes the adolescent's sexual behavior. It is articulated in *sexual self-esteem*, *sexual self-efficiency* and the *sexual representations of oneself*, which, in turn, is structured in four subdivisions (Goggin, 1989). They include: the physiological perception of one's own sexual activation, the display of explorative behavior, tied to the pressures of sexual desires, possibly anxious hypersensitivity to sexual contexts, and finally, interpersonal priorities, which identify the areas of *commitment* (Goggin, 1989). It is reported, moreover, that an individual's sexuality is not limited to a single possible expression but and how it can be expressed through a variety of styles which have been labeled, respectively, as *sexually naive*, *sexually insecure*, *sexually adventurous*, *sexually competent* and *sexually driven*, which are related to the different qualities of the sexual identity and which may be realized in various types of risky sexual behavior (Buzwell and Rosenthal, 1996).

Furthermore, during puberty, the increase of secretions of the gonadic hormone favors the emergence of the sexual desire, intended as the drive to be involved in sexual activity, looking for objects that will satisfy libidinal impulses. The intensity and frequency of this desire can threaten the balance of the adolescent, who has to experience it and make sense of it, in the light of the idea of sexuality that he encounters in his or her family, society and culture (Diamond & Savin-Williams, 2011).

If, indeed, the sexual desire fosters the sexual behavior of the adolescent, then it proceeds from a decisional process, which unfolds in different ways, in relation to the resources that the individual has available (Henrich Brookmeyer, Shriner & Shahar, 2006) and depending on the transactions which take place between the individual and his or her vital space (Bonino, Cattellino & Ciairano, 2005). Specifically, it emerges from the intertwining of the choices of two people, whose intentions to become involved in a sexual relationship are better predicted by their behavioral beliefs, religiousness, peer pressure, parental norms, previous behavior and the perception of controlling their own behavior. Nonetheless, their manifested behavior is determined by their previous behavioral experiences and their perceived behavioral control, more than by the desires they express (McCabe and Killackey, 2004).

It is, therefore, a self-regulated action (Bandura, 1997), aimed at responding to specific developmental tasks which the adolescents must face when dealing with his or her life systems (Bonino et al., 2005). Bonino et al. (2005) point out, in particular, that sexual activity plays at least three different roles in general adolescent development. The first refers to acquiring the status of adult, to the development of autonomy and the integration of the sexual component in personal identity. The second is connected to the need to explore, transgress and experiment, which characterize the adolescent. Lastly, the third pertains to emulative tendencies and the need to be accepted by peer groups (*ibidem*, 2005).

In relation to emotional development, instead, sexual behaviors offer the context in which young adults put significant parts of themselves into play, building their own way of living and expressing their emotions and affections, whilst guided by and modeled on a precise family and social context (Bonino, 2005; Buzwell e Rosenthal, 1996). Romantic relationships, on the other hand, offer the opportunity and the motivations for sexual desires to be realized, sexually-oriented emotions to be explored and sexual behaviors to be expressed (Diamond & Savin-Williams, 2011). Within that context, the adolescent learns to

integrate, in relationships with a person the same age, the sexual and passionate drives that he or she is feeling, and to develop the necessary competency to establish future *close relationships*. This competency includes being able to reveal oneself, reciprocity, empathy towards one's partner's sentiments and feelings, in addition to ensuring one's own well-being. That implies that, gradually and contextually, sexual objects are perceived as human beings endowed with autonomous desires and needs, which must be taken into account and borne in mind when expressing one's own needs and desires (Shuman, Connolly & McIsaacs, 2011).

2. Sexual relationships in adolescence: origins and evolution

The emergence of sentimental vicissitudes constitutes, therefore, a central aspect in adolescent development, closely intertwined with pubertal and sexual development. Within this framework, the negotiation of intimacy takes shape (Graber, Brook-Gunn, 1998), defined by Reis and Shaver (1988) as "... an interpersonal process within which two interaction partners experience and express feelings, communicate verbally and nonverbally, satisfy social motives, augment or reduce social fears, talk and learn about themselves and their unique characteristics, and become "close"." (pp. 387-388). This entails the development of emotional, behavioral and motivational competencies, whose acquisition represents an exclusively adolescent achievement, even though it is rooted in previous development phases (Collins & Sroufe, 1999).

Like more mature emotional relationships, those of adolescents are defined by five distinctive characteristics, represented by the involvement, the choice of a partner, the content of the relationship, the quality of the bond and by cognitive and emotional processes (Collins, 2003). They are formed within heterosexual groups (Bouchey & Furman, 2003), where the adolescent experiences new dimensions of affection and new ways to be in a relationship (Baldascini, 1996). Dunphy (1963), in particular, describes a process which, beginning with small homosexual groups (first stage), leads to the formation of a couple relationship (fifth stage), passing through three intermediate stages, in which heterosexual interactions become more and more frequent and profound until they are organized in genuine sentimental relationships. This rather dated model was later replicated, confirming that young adults begin to spend more time with others their same age in sexual interactions generally during middle adolescence and that they are initially experienced in the context of a group, but are later transformed into authentic dyadic relationships (Shuman, Connolly & McIsaacs, 2011).

Adolescent sentimental relationships, therefore, follow a path of emotional and sexual growth, defined by the orientation towards the other, the communication, commitment, care and sexual maturity (Franz & White, 1985). Specifically, the *self-focused level* regards, for the most part, a unilateral involvement with oneself, a scarce empathetic ability and an inadequate understanding of mutuality, during which one's own needs and desires take precedence and those of one's partner are overlooked. On the *role-focused level*, instead, there is an awareness, on the part of the individual, that knowing and respecting one's partner is part of being a good friend and a romantic partner. However, an adequate elaboration of the concept of emotional or sentimental commitment does not yet exist. Some sentiments are shared at the center of a relationship, while others are not explicitly expressed. This phase of romantic relationships represent, in adolescence, the basis on which a later capacity to establish intimate relationships will evolve, reaching the *individuated-connected level*. Individuals who possess this level of relationship competence exhibit an active understanding of themselves and others and succeed in committing themselves to stable and satisfying relationships, moving along lines of tenderness and passion (Franz & White, 1985).

It is not only the nature of sentimental relationships that change during the course of adolescence, approaching those typical of the adult world. The socio-emotional needs that the adolescent satisfies through these relationships also undergo a significant development (Furman & Wehmer, 1997). Indeed, during middle adolescence, they are especially functional in the activation and strengthening of the associative and sexual/reproductive systems, in so much as the partner represents the person with whom the adolescent spends his or her free time and shares positive emotions, as well as the companion with whom it is possible

to experience one's sexual orientation and build one's own way of experiencing affection (Furman & Wehmer, 1997). Later, in late adolescence and early adulthood, couple relationships will initiate and develop the functions of the motivational systems of attachment and caring, allowing the transformation of the partner into the main figure of attachment and the relationship with him or her into the new source of personal and relationship security (Fraley & Davis, 1977). From this moment forward, then, individuals begin to turn to their partners for the emotional and instrumental support which they need, modifying the hierarchy of attachment bonds and progressively transferring the functions from *caregivers* to sentimental *partners* (Collins & Sroufe, 1999).

3. Sentimental relationships in the context of other developmental processes

Romantic relationships are one of the declinations of adolescent development and, at the same time, play a primary role in the definition of other developmental domains (Furman & Shaffer, 2003).

The adolescent's falling in love supports the development of sexuality and the sexual identity, representing the primary context in which adolescents can experience their first sexual relationships and increase their knowledge in this area (Rodgers, 1996). Adolescents who wonder about their sexual orientation, in fact, find support in a relationship that confirms or modifies their own sexual preference, discovering the characteristics of others that attract them and learning what they desire from their partner and what their partner wants from them. Another person's sexual interest, moreover, helps them to face the emotions tied to feeling inadequate and positively reinforce a individual's self-image (Diamond & Savin-Williams, 2011).

Romantic experiences also influence the development of the adult identity. First, through couple relationships, adolescents develop a distinct perception of themselves and of others in an environment that is different from their sphere of family or friends, defining it in relation to the existence and sentimental quality of the romantic relationship (Connolly & Konarski, 1994). Secondly, sentimental experiences and the perception of oneself that derive from them, since they are strictly connected to an individual's psychological and psycho-social well-being, help to determine an individual's self-esteem, faith in his or her abilities and expectations of success in the sentimental and scholastic realms (Connolly & Konarski, 1994; Brooks-Gunn & Paikoff, 1997). Adolescents involved in an emotional relationships, specifically, perceive greater psychosocial well-being and are able to adapt to their developmental condition, benefiting from the advantages it offers in experiencing emotions and reducing the possibility of engaging in risky sexual behavior. The adolescents who have not yet experienced an emotional relationship nurture, instead, high expectations of personal fulfillment in the scholastic realm, but it does not guarantee their psychological well-being. They seem less willing to face the developmental tasks characteristic of their age, such as autonomy and the construction of the adult identity. Finally, those adolescents who have prematurely engaged in relationships and have developed promiscuous sexual behavior, perceive a greater sense of psychosocial malaise, in so far as they have only assumed the exterior features of an adult, nurturing scarce expectations of personal and scholastic success. That could later lead to experimentation with risky behavior and other insuccesses (Ciairano, Bonino, Jackson & Miceli, 2000).

Sentimental relationships also have an effect on adolescents' relational assets, by which, in turn, they are strongly influenced, with particular reference to their family relationships and those with their peers (Connolly & McIsaacs, 2009).

Although research has not yet been able to state in what direction this materializes, it is clear, for example, that couple relationships, together with friendships, help to reduce the time adolescents spend with their parents and determine a significant increase in the levels of conflict between parents and children (Furman & Shaffer, 2003).

There is, however, more information regarding the processes through which relationships with parental figures foster the emotional competence of children. In particular, the influence of interior operative systems allow adolescents to build reference schemas for the definition of intimacy and sanction the extent to which

they will be involved in romantic relationships, in addition to influencing the quality of those relationships (Furman, Simon, Shaffer & Bouchee, 2002). The literature points out, moreover, how relational dynamics between parent and child are predictive of those the child will form with his or her sentimental partner (Connolly & Mc Isaacs, 2009), as regards, in particular, nearness and emotional support (Smetana & Gettman, 2006), the adoption of interpersonal modalities that foster autonomy and assertiveness (Taradash, Connolly, Pepler, Craig & Costa, 2001), the ways to negotiate conflict (Reese-Weber & Khan, 2005), and more general communicative abilities and the levels of aggressiveness and hostility experienced during interactive exchanges (Furman & Shomaker, 2008). Nonetheless, it appears that this influence is more evident starting in late adolescence, when the emotional relationships of an adolescent resemble more those of an adult (Furman, 1999).

The parental effect on the emotional competence of their children, in any case, also refers to indirect processes, in so far as the matrimonial relationship of the *caregivers* offers a model on whose base it is possible to interpret and make sense of *close relationships*, in addition to observing and learning the dyadic patterns of communication, conflict resolution and the search for support that will be experienced at a later stage (Bouchee & Furman, 2003).

The emergence of sentimental relationships gradually makes friendships less important and is often the source of conflict between adolescents and their friends. It modifies the peer group from a structural point of view, too, fostering the entrance of new members and facilitating contacts with other groups. This process will stop, beginning in late adolescence when, in conjunction with the transformation of sentimental relationships into attachment relationships, the groups will become smaller and the contact between members will become less important and frequent (Furman & Shaffer, 2003).

Friendships and couple relationships, in any case, are characterized by analogous functioning modalities, with particular reference to intimacy, trust, and openness of the respective dynamics, to the communicative abilities put to use during interactions and to the degree of hostility and conflict with which they are characterized (Kutler & La Greca, 2004). The quality of friendships and the representational processes that are at their foundations, in fact, enable the acquired social abilities in relationships with peers to shape the nature of the couple relationship, too, and the low levels of support that may have been experienced in the peer group are correlated with those of *close relationships* (Furman, 1999). Moreover, a group of friends tends to direct the choice of potential *partners*, sanctioning the behavioral norms and rules of negotiation of the initial intimate relationships.

Regarding the aforementioned similarity, relationships with peers influence the development of romantic relationships within the limits of pre and mid adolescence, especially when they possess associative characteristics and those of sexual experimenting (Erikson, 1968). During middle adolescence, moreover, the ability to form close relationships is not a major developmental task, but rather an emerging evolutive characteristic which is still being defined. It is only at the start of early adulthood that intimacy, in its emotional and sexual components, will become a key process in the definition of the individual's maturity, allowing him or her to acquire the ability to form sentimental relationships (Erikson, 1968).

4. Conclusions

It emerges from the considerations reported here how sexual and emotional development identifies a set of deeply interwoven processes, which are fundamental for the definition of the adolescent's journey to adulthood.

As concerns sexual development and behavior, a greater understanding of adolescent sexual relations and how they are integrated into adult operations, would entail juxtaposing the study of premature sexual expression with the ecological analysis of individual developmental processes, making note of the elements of continuity which, like others, characterize this dimension of personal development, too (Savin-Williams & Diamond, 2004). Furthermore, it would be opportune to rethink the more general view of adolescent sexuality, disengaging it from the idea of danger, sickness and death that tends to be associated with it, to associate it with the idea of pleasure, joy and trust, fostering the awareness of normative and developmental aspects appropriate for adolescents and sexuality (De Nisi, Bianchi, Piffer & Arisi, 2008).

As regards emotional development, it has only been treated in a more comprehensive manner since the late nineteen nineties, shedding light on many aspects of an adolescent's falling in love, including the observation of specific properties of sentimental relationships, the identification of their developmental progression and structural aspects, the analysis of the connection between the processes and developmental objectives and the connection between loving relationships and other key relationships, and the exploration of the influence exercised by the psychosocial adjustment of the adolescent. In any event, each of these areas requires an in-depth analysis, beginning with a longitudinal study of the stages, overcoming the tendency to examine each phase separately, to continue with an analysis of intra and interindividual variability, connecting it with particular ethnic-cultural dynamics and finishing with the identification of pathological, or otherwise, atypical aspects of premature sexual relationships (Connolly & McIsaacs, 2009). Moreover, models have not yet been elaborated which are able to explain the complex influence exercised by parents, friends and peers and shed light on the probable effects of mediation and moderation (Smetana, Campione-Barr & Metzger, 2006).

In Italy, only a few of these processes have received significant scientific attention. If it is true that the study of pubertal processes and sexual behavior has been delved into, enriching the already substantial international literature, then it is also true that little attention has been paid to the analysis and understanding of sentimental relationships. It is necessary, therefore, to begin complex research programs that will be able to replicate the conclusions of international literature, identifying the eventual cultural specificities that shape the emotional development of Italian adolescents.

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AEmulatio, imitatio and mimesis in tertiary education

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Abstract

Emulation, imitation and mimicry are fundamental processes by which all children, adolescents and adults learn new skills, attitudes and behaviour throughout their lives. However, these basic processes seem to have been ignored or forgotten by most tertiary educational researchers. Most educationists believe that children develop through stages by using observation, and play. Children become expert mimics and learn how to speak, walk, and socialize by the time they are ready for school. In the first few years of school children learn by copying, rote learning and emulation of their teachers and peers, but as they progress, the importance of copying diminishes and may be penalized. At the tertiary level, emulation of scholarly writing styles, jargon and formats is always rewarded. This paper will use evaluation, observation and personal case studies in order to argue the value of these overlooked teaching techniques. It highlights academic ambivalence to plagiarism, and concludes the rhetoric about e-learning to be disingenuous. This paper asks educationists to rethink their pedagogy around mimicry, imitation, and emulation.

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Peer-review under responsibility of the Sakarya University.

Keywords: Imitation; emulation; mimesis; learning; tertiary education; higher education

Introduction

It is widely accepted that the first two or three years of a person's life provide the blueprint for the rest of their lives. During this time, we not only learn the incredible skill of speaking a language, but we also learn how to crawl and walk, how to feed ourselves, how to give and receive emotions and how to interact with other human beings. If we are prevented from learning these skills by a catastrophe such as an accident, by losing our parents, or by being abused, then our development becomes stalled and we may grow up maladjusted and stunted both cognitively and emotionally. During this significant period, infants predominantly observe their surroundings and imitate their parents and others in order to make sense of the world (Greer, Dudek-Singer & Gautreaux, 2006). While play provides positive physical and emotional feedback, and crying receives immediate attention, it is imitation that initially enables the infant to communicate with the world and its inhabitants (Bacalu, 2013).

A definition of "imitation" may seem rather trivial because it is such a well-understood concept. It means "a novel action that replicates both the processes and outcomes of a model". One cannot imitate oneself, it is a contradiction in terms. However there are several words, which are often used synonymously - in approximate descending order of resemblance: copying, emulation, mimicry, simulation, modelling, and exemplification. Disreputable synonyms include words like counterfeit, plagiarism and forgery. These are all related concepts but are slightly different in terms of intentions, means and ends. It is confusion over these fine distinctions that may have created the negative connotations that "imitation" seems to have gathered. "Copying" is essentially the same as "imitation" but without a perfect congruence of the original model. "Emulation" produces the same end result, but does not employ exactly the same methods as a model. "Mimicry" uses the same means, but with a different result to the original model (Snow, 2009). It is hugely problematic for most of us to make these fine distinctions, which are in fact, value judgments. So most people, and this article will use these words interchangeably and attempt to articulate any distinctions should the need arise.

Research on imitation and learning

A full-text search of all the electronic Proquest databases for the abstract keywords “imitation” and “learning” in the literature only brings up 386 relevant full-text, scholarly articles in mainly educational journals with earliest report from 1954 (*Kolner Zeitschrift Fur Soziologie und Sozialpsychologie*). In this German conference, many papers extolled the virtues of imitation and play for the neonate infant and put forward a theory of cognitive-emotional development of humans based upon these fundamental behaviours enacted from birth.

When these full-text articles are imported into the qualitative computer program, *Leximancer 4*, a clearer picture (see Fig. 1) arises as to the main themes and concepts found in the research literature to date.

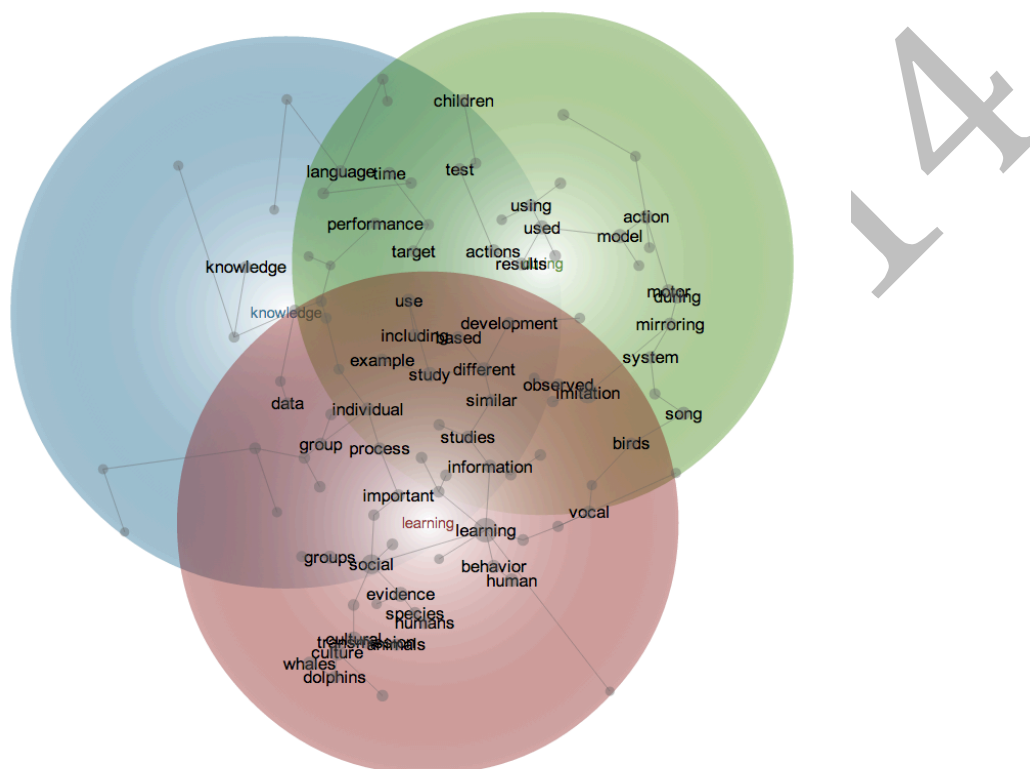


Fig. 1. Leximancer 4 heat map of themes found in literature on imitation and learning. Learning themes are more important than knowledge themes.

Leximancer 4 revealed that there were three major themes that could be found in the research literature on imitation and learning. The first (and hottest) theme (at bottom) concerned *learning*, the second (green, on right)) concerned *duration* (a time-related theme) and the third (on left) concerned *knowledge*. Themes in *Leximancer* are clusters of concepts, which the program ascertains by looking for frequent words and surrounding sentences. While *imitation* (omitted) was a theme, it certainly was a very minor theme overall, i.e. imitation as a cluster of concepts was not really talked about as relating to education or knowledge acquisition and has thus been relegated to an artifact or possible concurrent behaviour. It is apparent that imitation as a concept is rarely linked to learning, and when it is, it is in relation to children, animals (e.g. dolphins, whales, birds), neuroscience, performance studies, and language learning. Certainly, imitation is not considered a significant element in higher education in the research literature to date.

Full-text, scholarly ProQuest searches using “modelling”, “simulation”, and “exemplification” paired with

“learning” yield much fewer results with similar content and themes: children, primates, neuroscience, robotics.

Any discussion of the history of human exemplarity should begin with Homer, author of *The Iliad* and *The Odyssey*, in which the central heroes are used to demonstrate exemplary behaviour for all those who studied them (Warnick, 2007). The heroes of Homer were to become the focus of pedagogy for the entire Classical epoch and were still influential long after Roman world had moved beyond teaching the Homeric poems. These epics not only supplied the content of the heroic pedagogy, they also supplied the process – that of an older and wiser mentor who places a hero in front of the novice student and advises imitation. This process consists of explaining the actions of a model in terms of their benefits and arguing that these benefits are worth acquiring. This is the typical way in which imitation has been utilised from its earliest beginnings to the present day.

However this process of exemplification seems to have been ignored in more recent times by educational theories such as discovery learning, learning styles theory, behaviourism, cognitivism, transformative learning, constructivism, and multimedia theory. In the 21st C, instructors are also vigorously teaching a content-heavy curriculum, often using mandatory blended learning technologies and maintaining a research profile, that perhaps fundamentals of teaching have been forgotten? Some might argue that imitation is undeserving of study, however it is erroneous to believe that imitation is lowly mental activity worthy of children and animals. Williams, et al (2007) contradict the commonly held belief that when we imitate something we simply stimulate a mirror neuron system that specially exists to copy actions. From studying small finger movements using MRI technology, Williams, et al conclude that imitation brings into play cortical and sub-cortical parts of our brains, which are associated with short-term memory, associative learning, motor skills preparation and visual-motor amalgamation of goal-directed action. They state that matching our actions to another's can lead to powerful behavioural change and development. Contrary to obvious scholarly assumption, the ability to copy something, at least physiologically, is a higher order activity involving several major parts of our brain.

The centrality of imitation

Imitation is an essential educational ingredient in schooling (Nielsen, 2012) and also many fields of Social Science, and the Arts. For example, in music education, students learn to play their chosen instruments by copying the physical techniques and sound quality of their teachers' playing. Minute attention is paid to stance, posture, and use of body parts such as hands, mouth and lips. Similarly in music composition, a traditional exercise is to exactly transcribe note for note, a score of a great composer in order to understand the harmonic invention of that composer. This activity can just as easily be applied to other arts, such as writing (Tsuji, 2010), painting, or photography where the student is asked to mimic the style of an acknowledged master. The science of advanced musical instrument design and construction certainly revolves around being mentored by a master artisan, then building close facsimiles of famous violins, guitars, cellos and harps. The student instrument maker must copy the famous designs in order to make a living. All violinists aspire to play a Stradivarius or Guarneri so the apprentice luthier must copy these designs or risk financial disaster.

In medical science, interns both nurses and doctors train to diagnose patients by observation of senior nurses and physicians with hospital patients. Would-be surgeons are trained by more experienced surgeons to emulate their skills. This training process is arduous and requires trainees surgeons to spend on average 55 hrs per week and 10,000 hours in total, observing and copying the skills of other surgeons in order to develop the hand-eye coordination, the dexterity and the endurance to perform operations, which can last many hours (Purcell Jackson, 2009). Trainee counsellors, psychologists and psychiatrists must follow a similar (less intensive) training regime in order to qualify for registration with professional bodies. All teachers must undertake supervised practicums, usually with a highly experienced teacher (the exception being University instructors). Pilots, legal professionals, social workers, translators, media producers and researchers all require training which always involves imitating and copying the actions, behaviour and mindset of others.

This paper is not the place for a debate about the differences between technical/vocational training and so-called education. The author believes that the distinction between training and education, reflected in the university and technical college divide may have been a reality in the early 20th century, when careers were clear-cut, and blue collar work did not overlap with white collar skills. But in contemporary Western society, so many professions

require both higher-order knowledge and a range of other advanced skills that training is a recognized and essential part of most educational fields. The typical educational psychologist could be capable with all the MS Office programs, plus SPSS, and N-vivo, have had hours of clinical supervision, and may be trained in NLP techniques, and non-verbal communication skills. The author is a white collar academic who has trained in both PC and Mac software platforms, runs his own Linux server, and has trained in video production, sound recording, and advanced Web design. Training courses and skills acquisition are simply not the sole province of plumbers and electricians.

The problem of plagiarism

Plagiarism is regarded as intellectual theft and universally discouraged by all tertiary institutions. The typical plagiarist will copy sentences and paragraphs, even whole articles without any change whatsoever. In many instances the plagiarist will be an international student who misunderstands the nature of academic writing, or has poor English writing skills, or both (Guranjan & Roberts, 2005).

However, plagiarism is problematic for tertiary institutional policy because when it goes unnoticed it is often rewarded with high grades, and when it is clearly identified it is punished with failure. Many institutions now employ software safeguards, which identify duplicate online sources of student assignments. These computer programs are not foolproof, they often highlight appropriately cited quotes and paraphrases, and they do not identify any copied material in books, government publications, old essays, company documents and essays written by proxy authors or newly downloaded from “cheat” sites. These programs also function to sanction student work, which has a low plagiarism score according to its algorithms and databases. Instructors tend to trust the program, not their own judgment. In some institutions, a professor may not initiate proceedings against suspected plagiarism, unless a high duplicate score is obtained. For nearly a decade institutions have been requiring students to use plagiarism checkers, and so paradoxically, by archiving a copy of every submitted student paper, these companies are possibly enacting the very process that they are protecting others against, since no informed consent has been given for this to occur (Horowitz, 2012).

There are now several commercial and free programs, which will detect cases of plagiarism – Attributor, Copyscape, Ithenticate and the major academic software, Turnitin used in over 10,000 institutions worldwide. As the database for Turnitin grows, the number of sheer chance hits increases. In 2013, the author received an essay on a popular media topic that had a plagiarism score of 45%, but that score was made up from 45 different sources and consisted of mere fragments of sentences. Institutional practice is to investigate all instances of high duplicate percentages, and to punish any student whose score is higher than some arbitrary figure. But to authentically plagiarise from this many sources would have taken more effort than writing an original essay. Could it be that plagiarism software databases are now so large, that their only use is that of a deterrent?

One of the trickiest academic issues is that of plagiarising oneself (Glen, 2008). Obviously recycling a previous paper is an unethical act, but what about a single sentence or part sentence? Most academic authorities advise providing a citation for paraphrasing oneself. But how can a paraphrase of a previously published paragraph constitute plagiarism (or theft) if the author was the person who holds the copyright? The mistake here is to equate duplication detection with plagiarism, which is more than mere duplication. Plagiarism is copying with the intent to defraud, to take ownership and receive rewards for something that belongs to someone else. In the case of plagiarising myself, the words are definitely mine. The fact that software can now efficiently detect online duplicates does not revoke my copyright.

Case study: *Instructors as models*

The author has taught Communication units to a wide range of students from Business, Engineering, Nursing, Computing, Mathematics, Law, Arts, Design and Communication degrees at both undergrad and postgrad levels. One of the most common activities at university is the face-to-face lecture in which an academic addresses a large group of students for about an hour showing Powerpoint slides, graphics and videos often talking about theory and giving practical examples. In many subjects, students have to give a presentation in a smaller class as an assessment

activity. It is common for students to adopt a very similar style of presentation, including the style of Powerpoint.

The author has changed his Powerpoint slides from standard text-only bullet points (in the 20th C) to slides that more resemble excerpts of Web pages, often with photos, videos and cartoons. Most students imitate these add-ons either unconsciously, or more understandably, because they have no other models to draw upon. Thus, student presentations resemble the lecturer's presentations right down to the style of cartoons chosen. Without having had much experience with presentations, students opt for the tacit exemplar of the instructor. Students in some cases even search for examples of the author's writing, both citing published works, and also mimicking the style of writing and the arguments found in these articles.

This places a huge responsibility upon educators to not only be knowledgeable about subject content, but also be highly skilled at the various methods for presenting such content. The one to one context of Homeric mentorship is no longer an option thus lecturers will always teach in front of large classes. Thus, tedious slides full of illegible text, or dreary personae, monotone voices and lack of enthusiasm will not only lead to mass exodus from classes, but students who may copy and mimic such boring models in their own presentations and writing submissions.

Case study: *Instructions vs models*

A typical First Year subject in many degrees is the core unit, which teaches written and often, oral communication skills to students who often come from a diversity of cultural backgrounds. A classic assignment in such a subject entails asking students to read academic articles and/or textbooks and then summarise them replete with references in a particular academic style such as Harvard or APA. This is variously called the Annotated Bibliography, or Academic Paragraphing exercise and can be worth a high percentage of total marks. In some instances the assignment will include a set of instructions on how to summarise the article in terms of Introduction, Paragraph 1, sentence 1, sentence 2, sentences 3 and 4, etc. This supposedly helpful instructional template poses problems:

ACADEMIC PARAGRAPHING GUIDE	
Introduction	
Topic:	_____
Thesis:	_____
Scope (Map)	_____
Body Paragraphs	
Paragraph 1 - Topic sentence (<i>Topic + Controlling idea</i>):	_____ (1 sentence)
Supporting	
<i>Description: (Summary of one Extract with in-text referencing)</i>	_____ (2-3 sentences)
Supporting evidence (<i>Critical reflection; literature summary/paraphrase with in-text referencing</i>)	
Feelings:	_____ (1 sentence)
Evaluation:	_____ (1-2 sentences)
Analysis:	_____ (2-3 sentences)
Concluding sentence:	_____ (1 sentence)

Fig. 2. Example of instruction template – helpful or not?

By setting a completely new assignment task, then expecting students to follow an exact recipe in terms of creating a paragraph, then set of paragraphs, an inexperienced instructor has focused the complexity of the task from the assignment level to the sentence level. Students simply do not understand how to write one sentence for an Introduction, or two sentences for an “evaluation”. No matter how detailed the instructions, a simple model or example of what is required would have removed the anxiety, that First Year (and beyond) students' experience,

when they encounter such novel assignment tasks. There seems to be entrenched reluctance for instructors to provide exemplars, possibly because copying a model is not viewed as creative enough, or not real academic writing. Similarly, many such assignments require not just one summary, but often as many as 10 or more such summaries. Surely, if a student can summarise an academic paper once or twice then they have shown they can perform the task?

The end outcome of such novel assignments and templates on students are chance, sink or swim results, with many students obtaining low grades or failing because they are inexperienced with writing academic summaries, or they do not have the resources or friends to help them. A simple model of what is expected would allay most anxiety caused by lack of experience and understanding of unknown concepts. The students who can maintain their commitment and engagement in lieu of anxiety, confusion and low marks, are the ones who will eventually successfully finish their first year.

Case study: *Imitating structure is not plagiarism*

The business report is a commonly taught genre in many communication courses across many fields such as business studies, computer science, technical writing, engineering, law, and nursing. These communication courses are often found in First Year undergraduate programs and typically taught by sessional instructors or casual staff. Cohorts tend to be large and diverse, class sizes also large, and the students will typically represent a variety of cultures and backgrounds.

In order to cater for such a large course, and to standardize the teaching, a coordinator will often use a textbook in order to give students the basics of what a report should cover, and what the major sections of the report should be. A usual assignment would be to produce a student report around some fictitious business topic, such as a costs/benefits analysis or an evaluation of some technology, product or service.

In all of the author's units where a report is called for, the students are encouraged to use Google to locate their own report exemplars, which they find comprehensible and close to their own topics. They are then asked to copy the found report structure including tables, graphs and headings (but not the data). In this way, students do not have to create a fictitious assignment which bears no resemblance to professional documents used in real-world contexts. It also eases anxiety for many students who may never have written a report before in their high school careers. Most students modify existing reports to suit their own needs, and are confident that a copy of a real-world report will be suitable skeleton body for their own data and results.

E-learning and imitation

Education has been irrevocably changed by the advent of e-learning technologies made possible by the Internet from the mid-1990's. All existing courses are now supported by additional Web resources (text, sound, video), which add extra value to coursework. Blended learning is the new method for the vast majority of undergraduate courses. Near-universal student access to the Internet, ubiquitous e-learning management systems, and somewhat easy authoring tools have also led to the possibility of teaching students who never set foot on a university campus. While management systems technology (such as Moodle and Blackboard) has become entrenched at some institutions, new publishing systems (such as Wordpress and Drupal) have started to replace (and compete with) the old ones. The result of this plethora of technologies and methods is that teaching, per se has been subordinated to the various technical intricacies of institutional websites. At the author's institution, Blackboard exists alongside Wordpress and instructor driven home-grown websites. All the new systems host a range of options, which have been programmed into the basic and advanced functions, and instructors become immersed in becoming proficient with menu items, multimedia, and making the new system replicate the old one. However what is missing, is innovative teaching.

Some might argue that having access to online resources, forums, wikis and blogs is innovative, but the author has had student feedback that asks a return to old-fashioned paper-based readings, face to face group discussion, and more human contact in lectures and tutorials. Online teaching may be regarded as the future of tertiary education, but some studies conclude that a wholly web-based curriculum places low-income and struggling students at severe

risk of failure or underachievement (Smith Jaggars, 2011). Dropout levels of up to 90% also give an indication of the lack of satisfaction produced by online courses. While e-learning management systems certainly permit use of all kinds of multimedia, and online interactive tools, they do not encourage innovating teaching methods – they simply recycle good traditional teaching in an online context. Innovative methods should include activities, which comprise imitation, emulation, and mimicry but such old fashioned pedagogy is pushed aside.

The author believes that many instructors who are making the choices to go online have never taken a fully online course in their life. If they had, then they would have experienced first-hand, the inherent problem with online education – lack of human contact which assists learning a range of concepts, lack of good models in terms of inspirational staff and fellow students, and lack of useful and appropriate exemplars to mimic. Progress in education should not be about creating online courses for the maximum number of students; innovation should not consist of computers attempting to deliver traditional face-to-face interaction. The bases of authentic learning, even in the 21st century, are those activities, which humans have employed since they were babies, toddlers, and children – finding respectable mentors to copy, perfecting suitable skills via mimicry and practice, and selecting various parts of the scientific, professional or academic world to imitate.

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Amenable performance management in high education: Integrating principles of agency and stewardship theories

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Abstract

In response to financial austerity measures, performance management systems (PMS) have been implemented in South African higher education to monitor and enhance staff performance. This paper conceptualizes performance management in higher education using agency and stewardship theories. Data emanates from a phenomenological study of academic heads of department's experiences of performance management. There is evidence that agency theory may be an appropriate mechanism to achieve explicit accountability yet is fraught with problems within academic contexts. The findings demonstrate limitations of agency theory with regard to the stewardship of academics. This thus foregrounds the need for the retention of approaches underpinned by stewardship theory.

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Peer-review under responsibility of the Sakarya University.

Keywords: agency theory, stewardship theory, performance management, higher education

Introduction

The operations of higher education institutions (HEIs) are continuing to being revolutionized by governments' demand for performance accountability regarding teaching, learning, and research outputs, as well as the increasing requirements of prospective employers for work-efficient graduates (Vilkinas & Ladyshevsky, 2011). It is thus business unusual for HEIs as they strive to meet the needs of an "increasingly consumer-oriented and diverse student population, and the need to keep up with technological changes in educational delivery" (Vilkinas & Ladyshevsky, 2011). Following major cuts to the budgets of South African public HEIs, efforts to monitor limited resources has led to the introduction of performance management systems (PMS) that mirror corporate governance practices (Brunetto & Farr-Wharton, 2005). This managerialism approach has heralded a new era of academic accountability, which is expressed through financial controls (Fredman & Doughney, 2012) and the generation of third stream incomes to sustain their operations (Molefe, 2010). As a consequence, performance management (PM) has been implemented in South African HEIs to monitor and enhance staff performance by offering financial rewards where targets are exceeded.

The concern of this paper is however not the perceived lack of accountability in universities, as inferred by

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managerialism. Rather, it is the traditional implicit culture of accountability, where academics were expected to be self-regulating professionals, ensuring their contribution to human resources through teaching and new knowledge through research. Thus assisting universities to thrive and contribute to societal advancement. I argue in this paper that contractual forms of accountability that are financially rewarded represent agency theory propositions that have been exposed for their limitations. Additionally, that the context of higher education is not amenable to purely economic approaches. Rather, complement it with stewardship theory propositions that appeal to academics' self-driven disposition for excellent performance, which at the same align performance to institutional goals. The research data emanate from a phenomenological study of academic heads of departments' (HODs) experiences of performance management.

Evidently, academic HODs are now held accountable for their departments' performance through a performance contract that stipulates key performance areas (KPAs) and targets (Insler, 2010) and such performance are linked to rewards. From this perspective, the association between academics and HEIs reflects a principal-agent relationship that is framed by agency theory. Following this new relationship, research has suggested that there are PM challenges with negative consequences for academics and institutions alike (Fredman & Doughney, 2012; Du Plessis, 2011). It has thus become necessary to interrogate economic theories to provide a conceptual framework for PM since the higher education changes are economically justified. The paper argues that a more critical approach to PM is needed in order to question the consequences, assumptions of the agency and stewardship theory. Herein a proposal is put-forth to integrate the agreeable prescriptions of both the theories for an amenable academic PM.

Performance management (PM) is traditionally a corporate concept that has been used to monitor and evaluate the performance of employees as contracted in alignment with the goals, key performance areas and indicators (Kaagari et al., 2010). Armstrong (2010) considers PM as an instrument of achieving superior outcomes from the entire organization represented by individuals. It is vital to note that HEIs are defined as knowledge-creation entities that are perceived as knowledge businesses (Bridgman, 2007), with distinct identities. Alvesson (1991) has argued that cognitive aptitudes, as opposed to bodily agility, are requisite for productivity within universities. For this reason, institutional productivity is achieved through academically competent employees with high regard for independence, individual status and reputation. With such a constructed identity, it is pertinent to ask how academics can continue to perform satisfactorily within the contractual confines underpinned by corporate principles. I argue furthermore, that apprehensions about PM can be better understood as the effects of specific systems of accountability that have important implications for the success of PMS in higher education.

Agency theory is a business model based on assumptions that employers and managers are self-serving economic beings, pursuing individual utility maximization (Jensen & Meckling, 1976). This theory presupposes a contractual relationship between principals (owners) and managers (agencies) where managers are obligated, through corporate rules, to fulfill their mandate of pursuing the principal's interest (Eisenhardt, 1989). The purpose of offering incentives to the agent is therefore to motivate performance and achieve control as well as to restrain the agent from focusing personal interests to the detriment of those of the principal (Davis et al., 1997).

Therefore, with the corporatization of higher education, the new culture of accountability that is financially rewarded befits agency theory propositions. In this sense, the assumptions of agency theory are being applied to academics that are now perceived as agents that are utility maximizers. It is from this perspective that this paper interrogates the adoption of a business approach that implies a shift from an academic culture of colegiality and freedom that arguably resonates with stewardship theory. Stewardship theory presupposes a principal-steward relationship where the steward is driven to performance by his or her need for self-actualization. According to this theory, employer-employee relationship is characteristic of an academic context as academics are self-

regulating and intrinsically motivated to achieve status and scholarship.

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2. Theoretical Review

2.1 Agency theory

Jensen and Meckling (1976) define an agency relationship as “a contract under which one or more persons (the principal[s]) engage another person (the agent) to perform some service on their behalf which involves delegating some decision-making authority to the agent”. Agency theory as a neoliberal theory is professed to be suitable in providing insight into the radicalized transition of the public sector including HEIs (Olssen & Peters, 2005). Althaus (1997) also observes that agency theory has been central to the overwhelming reform that has taken place in many countries with the purpose of maximizing economic efficiency, stating:

It has underpinned funder/provider and policy/delivery splits (the decoupling strategies) both within the public sector bureaucracy as well as between the bureaucracy and the state, and resulted in policies of deregulation, corporatization and privatization (Althaus, 1997).

For this reason, academics have been apprehensive of managerialism. Agency theory also postulates that the model man is a rational actor who seeks to maximize his or her individual utility (Jensen & Meckling, 1976). However, the utility maximizing nature of the individual is perceived to be a problem because it is presumed to be an inherent deterrent for agents to maximize the principal's interests. Thus the underlying distrust of the agent. This means the agent is generally expected by nature to pursue self-interests and to shirk his/her responsibilities to the principal, unless they can derive some benefit (Roberts, McNulty, & Stiles, 2005). Furthermore, the theory describes the contractual relationship between principals (owners) and managers (agencies) as one in which managers, through corporate rules, are obligated to fulfill their mandates and are incentivized to perform by rewards (Eisenhardt, 1989). From this perspective, agency theory appears problematical since HEIs are non-profit organizations. Thus, posing a challenge of the limited financial rewards that may not adequately incentivize academics as agents (Du Plessis, 2011). It may therefore be assumed that the parties to the principal-agent relationship have diverging interests, which could limit the ability of agency theory to provide relevant accountability practices for nonprofit organizations (Steinberg, 2010).

Since principals and agents have diverging interests, it can be inferred that either party would not necessarily be persuaded to serve the other's interests, unless there are persuasive rewards (Van Puyvelde et al., 2013). The extent to which such rewards are perceived as satisfactory thus determines the success of the relationship. In addition, the theory promotes hierarchical relationships, where individuals at the top of the chain are regarded as principals and those at the bottom considered to be agents (Olssen & Peters, 2005). This means “it specifies chains of principal-agent relationships as a series of contracts as a means of rendering the management function clear and accountable” (Olssen & Peters, 2005).

For this reason, agency theory is criticized for reducing social relationships to contracts and for propagating an egotistic agenda that contrasts with the acknowledged self-motivating effect of scholarship that serves a bigger purpose of keeping pace with knowledge development (Houston et al., 2006) and social regeneration. In this regard, Eisenhardt (1989) concedes “extrinsic rewards as the basis for reward systems represent the control mechanism of agency theory”. It is apparent then that agency theory assumes that extrinsic motivation as facilitated by financial rewards is the cornerstone of improved performance and employee loyalty. However, this fails to take into account employees' internal commitment, loyalty and enjoyment of their jobs.

To what extent can such an approach be successful if employees perceive the rewards as inadequate? Health (2009) postulates that as selfish interest is core to the agent abiding to the principal's contractual dictates, these would be cancelled out if there were any changes to the conditions prior to performance of the task. Consequently, there is a

direct link between changes in performance and changes in incentives (Prendergast, 1999). In the context of agency theory therefore, the value of performance is defined by the extent to which the agent achieves or exceeds the principal's expectation (Daily et al., 2003). What this means is that the application of this theory will have serious implications for performance and rewards in higher education.

2.2 Stewardship Theory

Stewardship theory was proposed as an answer to the complexities related to agency theory prescriptions (Davis, Schoorman & Donaldson, 1997). The aim was to promote a move away from an economic view, which ignored the human nature to possess strong need for self-esteem, self-achievement, growth, fulfillment and belonging (Arthurs & Busenitz, 2003). Stewardship theory defines situations in which managers are not motivated by individual gains, but rather are stewards whose motives are aligned with the objectives of their principals (Davis et al., 1997). From this perspective, stewards act in the best interests of the whole organization and serve the greater good, which relies on mutual trust (Davis et al., 1997). They are thus motivated to act in the best interests of the principal. As Tosi, Brownlee, Silver, & Katz (2003) have shown, the alignment of employees' behaviors to the principal's interests reflects the independent pursuit of the employees' high order needs of growth, achievement, and autonomy. This is in contrast with the view offered by agency theory that portrays the agent as perpetually selfish and dishonest. Manz (1986) points out that:

Intrinsic motivation is linked to self-leadership, which is a comprehensive self-influence perspective that concerns leading oneself towards the performance of naturally motivating tasks as well as managing to do work that must be done but is not naturally motivating.

Hence, individuals in this position do not need contractual relationships to persuade them to perform in the interests of the principal because their altruistic nature motivates them (Nelson & Quick, 2003). In light of Manz's contention, it may be argued that stewardship relationships apply to the higher education culture of academic autonomy, characterized by high levels of self-motivation that has been noted as imperative in academia. Eisenhardt (1989) further emphasizes that managers within steward relationships need authoritative autonomy to fulfill their job expectations innovatively in order to attain organizational success.

On the basis of the evaluation of agency-principal and stewardship-principal relationships and the current higher education context, it appears that integration between the agency (explicit accountability) and stewardship theory (autonomy) provides hope for an amenable PM. This is in line with the current approaches to PMS, that man is motivated to perform by financial gains and man is motivated to perform to attain self-actualization needs. Fusing both theories will enable the mitigation of the perceived inadequacies of agency theory while retaining the positive effects of stewardship theory. Examining the conditions under which each is essential (Davis, et al., 1997) could be necessary for the implementation of a PMS.

This study is a conceptual framework that is part of an exploration of academic HODs lived experiences of PM. I adopted a phenomenological approach, using in-depth interviews to interrogate the perspectives of faculty HODs on the impact of PM on their work-life.

3. Findings

The findings are categorized under different themes to reflect the assumptions of agency and stewardship theories within higher education context. This has the potential to deepen the understanding of feasible ways of implementing PM in higher education.

Principal-agent contractual relationship perceived as distrust of academic professionalism and autocratic

The participants in the study are uncomfortable with PM as a militaristic control system that requires 'binding' contracts on the basis of which they become committed to achieving the given targets. There is consensus that the institution does not adjust PM, which is essentially a corporate practice to fit into an academic environment. Participant 6 conceded as such:

But I do admit that in the education it's very tricky. Because...this is a different type of profession where people are doing a lot of things by passion. So I've seen people who as soon as you start talking about performance management agreement, they freeze. They are not interested because you are starting to put target and...you are starting to control.

Participant 6 is alluding to academics disapproval of quality review approaches as observed by Cheng (2009), which are viewed to represent the misgivings the system has about the professionalism of academics. It is apparent from the study that academics consider PM as a control mechanism that serves to 'police' them. This resonates with the agency theory notion of control through close monitoring to ensure that agents make performance decisions that will maximize the institution's utility. In their exploration of the demerits of agency theory, Tosi et al. (2003) argue that tight monitoring and performance-linked rewards can hinder the intrinsic motivation of a steward and possibly limit the outputs beneficial to the employer.

The perceived distrust is further emphasized by academics' observation of institution's autocratic tendencies. Participants were unanimous in the view that the executive leadership does not attempt to carry employees along in the implementation of the PMS. Participants reflect this in their comments:

Well, obviously I mean the powers that be; they will make decisions up there. I'm sorry; I mean that's how we work. I think a lot of things are imposed on us without thorough understanding of what it entails at this level..." (PT1). Participant 4 expressed her unhappiness thus: "We only became involved in it once there was already...structures in place. So I don't think we were part of the development of the process...the first time we really became involved was when we had training ourselves and our performance management started.

For the participants, PM is characteristic of hierarchical management where various levels of performance are delineated according to individuals' position on the chain of control without consideration of those at the lower rungs of the ladder. Making similar observations, Tipples et al. (2007) state that there is ample proof that an increasing number of policy plans implemented in HEIs are done without negotiations between the senior management and other members of staff. This resembles a top-down monitoring that characterizes business organizations, and conflicts with the more collegiate and sophomore culture of universities.

Data evidence also demonstrated that this approach fosters resistance from employees. As Participant 6 put it: "It's the perception...towards...performance management system whatever form it...takes. There was a lot of resistance...here...and it was just something that people were doing for the sake of having some paper work to store somewhere. But nobody believed in it". These reflections are also consistent with the view espoused by Cheng (2009) that the shift from collegiality to managerialism in higher education has compromised the Socratic idea that university teaching is inspired by the desire to impart knowledge and skills. In similar vein, Ngcamu (2013) notes that employees generally have negative perceptions about PM as most of them disagree with or are undecided about the need of PMS policies.

Performance contracts linked to financial rewards bring complexities that thwart academics' efforts to pursue high performance outputs

There are indications that academics do not feel that PM linked to rewards is adequate to enhance their performance. With regard to counter-productive behaviors that may emanate from dissatisfaction with PM, Participant 6 has this to say about the response from his staff: "They don't want to do research anymore. They don't want to contribute and they accept that...they won't have bonuses. They are not interested because you are starting to put target[s] and you...are starting to control". Segal and Lehrer (2012) warn that the focus on high financial performance rewards as a control tactic could breed manipulative behaviors among employees who are egotistical and dishonest, and who

would seek to gain rewards while putting in as little effort as possible. Roberts, McNulty & Stiles (2005) also contend that the excessive focus on control could offset the intended high performance, and result in a situation where “employees develop coping strategies by doing what is minimal of default whenever they have an opportunity”.

In line with participants’ concerns about the extent to which PM can enhance performance, it has been noted that that nonprofit organizations could be faced with added agency challenges than their corporate counterparts due to the incompetence of principals to monitor agents (Ben-Ner et al, 2011; Van Puyvelde et al., 2012). Furthermore, there are complexities associated with the precise determination of performance outcomes, as there are too many criteria in education (Parsons & Slabbert, 2001). Also, they possibly will be confronted with the intricacies of determining valid performance criteria to accurately measure rewards (Jegers, 2009). Radin (2006) contends that the private sector has the advantage of using profit as a yardstick for success, whilst the public sector has to appeal to more complex mechanisms.

Limited financial rewards in higher education are an agency problem

All participants agreed that financial rewards are not the sole motivation for commitment to performance. In some sense this perspective exposes the reported limitations of agency theory within an academic environment. However, if financial rewards are promised they do create an expectation of additional money. Participant 4 reports: “It’s nice if it leads to a reward. But...for me it’s not my ultimate goal”. Participant 3 was also in agreement: “I know that if I went into private practice I’d be earning three or four times what I earn. That on the balance of it...I’m still happy and as long as I’m contributing I’ll stay”.

Be-Ner (2011) established that government organizations that do not pursue goals for profit purposes are in a disadvantaged position to offer high monetary rewards than their corporate counterparts. Consequently, this presents the agency theory problem, which infers that HEIs should rely less on incentives due to less financial resources. It also supports the view that intrinsic motivation is more enduring and is not fully dependent on financial incentives. Yet, HEIs have introduced the practice of performance rewards about which academics have made comments such as:

Being an HOD at this institution is a disadvantage – there is absolutely no value to all the input you give...to ensure that the department runs smoothly. All you get is a management allowance that is ridiculous” (Participant 3). Participant 4 argued: “What is hard for me is the fact...that if you have just done your job you know you get nothing...and is not always easy...to do much over and above with all the extra expectations...”

Therefore, with insufficient finances available to HEIs, they are limited to exploit them as part of a PMS to motivate academics (Parson & Slabbert, 2001). It is evident that the unfulfilled promise of the monetary rewards can be a major source of discontent.

Valued non-monetary rewards

Participants were unequivocal about the value of the traditional academic non-monetary rewards, which appears to contribute to their job satisfaction. Participant 3 acknowledged: “I try and get at least an overseas trip a year out of the university... And at least I have then these none intangible benefits to it”. Participant 6 was appreciative of his sabbatical, saying: “The [university] has made big efforts. I was on sabbatical myself...for sometime”. Additionally, the opportunity for some academics to undertake paid private work as part of their profession can be considered as non-monetary rewards by which their salaries are augmented at the same time professionally fulfilling. Participant 3 commented: “I’m lucky because my qualification means that I can have a [private] practice. So I can supplement and balance things...and that’s why I’m happy in my job because I have balance...I wouldn’t if I didn’t have my practice. I mean this is just not enough money”.

Such appreciation of non-monetary rewards also impacts positively on institutional performance and aligns with the assumptions of stewardship theory. Specifically regarding the intrinsic motivation to work towards achieving the

organization's goals at the same time fulfilling individual goals of career advancement (Tosi et al., 2003). Also, academics expressed a desire for the continued provision of non-monetary rewards such as time for private work and research, research funding and professional development prospects (Mohamed, Sapuan, Ahmad, Hamouda & Baharudin, 2009). It has also been demonstrated there is a significant positive relationship between employee's job satisfaction and commitment and performance, thereby recommending that organizations should focus more on human resources than on competitive strategy (Kagaari et al., 2010).

Continuing collegial practices within the control framework of new managerialism

Participants were unanimous in the view that maintaining an atmosphere of collegiality is necessary to moderate the perceived autocratic managerial tendencies within their institution. Having heavy workloads and being required to meet high performance targets make such an atmosphere difficult for HODs to carry out their duties. As Participant 4 put it: "But...people's [heavy] workloads is problematic. So you can't put too much pressure on people to perform. There are certain things...that you have to take a little bit more of a softer approach to". It appears that HODs have to resort to a collegial approach for some sort of adherence to institutional regulations. In this way, the interests of HODs, as agents, remain protected and academics are permitted to enjoy their professional privileges. This can be understood as a sort of compromise to the requirement of tight monitoring that is proposed under agency theory, bringing the accountable independence related to stewardship.

Glaeser (2002) contends that, from an agency theory position, managers are expected to alter job designs and settings to satisfy the favored choices of those employees with high competencies that they can use to either support or sabotage the manager. This reflects the motivations behind HODs collegial approach towards their subordinates that recognizes the fact that HODs are actually appointed by a process in which colleagues nominate them. Moreover, their overall performance depends on the performance of the same colleagues.

4. Conclusion

The government's demand for accountability and efficiency precipitated the introduction of performance rewards in HEIs to control outputs and motivate academics to enhance their performance. There is some indication that agency theory may be an appropriate mechanism to achieve accountability and probably enhance performance through bonuses. Yet, there is evidence that this approach is fraught with problems, particularly within academic contexts because performance contracts are perceived to dilute academic freedom and also question the integrity of academics. Furthermore, academics tend to resist this approach by adopting counter-productive behaviors. In addition, inadequate monetary rewards, which are core to agency theory prescriptions, fail to motivate staff. To a large extent therefore, the findings of this study demonstrate the limiting effects of agency theory with regard to the stewardship of academics. This thus foregrounds the need for the retention of approaches based on the ideas underpinning stewardship theory that are currently perceived to be under attack. Persuading this proposal is the participants' common observation that collegiality is still vital to moderate the perceived autocratic managerial tendencies within their institution.

To all intents and purposes, the profession has been one in which professionals are fundamentally driven by self-accountability. As a consequence, the accepted limited academic monetary rewards have always been consciously deferred. Only to be derived once the self-actualization needs have been achieved, i.e. professorial appointment. Endeavors to attain academic credibility through scholarship have been related to assisting the institution to build a research track record, which is critical to its academic standing. Therefore, managerialism cannot be legitimized by claims of academic non-accountability.

A concession needs to be made that the era of accountability is not going anywhere; in fact it can be assumed that as resources continue to dwindle, the leash of control will tighten further. Pertinent questions need to be asked: How do HEIs retain their essence as knowledge organizations dependent upon academics' sense of autonomy, while still being accountable?

There are inherent contradictions in the corporatization discourse and traditional academic discourse of collegiality. First the aforementioned theories, though contrasting, promise a different approach that is worth a consideration to ease the tension. The view is to interrogate the essence of the competing values of managerialism and academic collegiality to determine if there could be a co-existence that will enable accountability, without offending academic autonomy. This where the coexistence that is well thought through between agency and stewardship theory could provide for an amenable PM in HE.

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An analysis of educational faculty students' research self-efficacy in terms of a number of variables

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Abstract

Enabling students to acquire the research abilities is an educational issue. The target of education is to raise individuals with research-oriented attitudes and behaviours. Sustaining the research activities requires that, in addition to the compatibility of research environments, individuals and institutions to conduct the research have the competence facilitating them to do the research. Therefore, the need was felt to determine educational faculty students' levels of research self-efficacy. This research examines whether or not educational faculty students' research self-efficacy differs on the basis of gender, university, department, and taking or not taking the Scientific Research Methods course. The research sample was composed of 532 volunteering students attending the Psychological Counseling and Guidance, Elementary School Mathematics Teaching, Science Teaching, and Computer and Teaching Technologies departments of the educational faculties of Amasya and Eskişehir Osmangazi Universities. The research data were obtained through a 43-item, 5-pointed Likert scale of Research Competence (Büyüköztürk, 1997), with a reliability coefficient of $\alpha=0,89$. In the analysis of the data, the frequencies and the percentages for the variables were calculated, the one-way variance analysis (ANOVA) and the significance test for the difference between two averages (the t-test) were employed. When differences were found between the groups in consequence of the variance analysis, between which groups the differences were available was found via the Scheffe test. Consequently, it was found that educational faculty students' research self-efficacy differed according to department, and to whether they took the Scientific Research Methods course; but that it did not differ according to gender or university.

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Peer-review under responsibility of the Sakarya University.

Keywords: research; self-efficacy.

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1. Introduction

The power of societies has always relied on differing sources. The concept of industrial society in particular was based on production depending on industrialisation, and kept existing for a long time. In the process following the industrial society, however, the fundamental factor of production and power was information, and thus being a society of information became increasingly important. Information societies need individuals who can easily reach information, who can use it and contribute to its production, who have the evaluation and communication skills with the capability of analysing and synthesizing, who are creative and who have internalized the universal values. In this context, educational systems must raise the manpower carrying the properties in question (Saracaloğlu & Kaşlı, 2001).

Science and education are complementary to one another. At the intersection of these two phenomena is the Universities. The functions fulfilled by universities are divided into three groups as education-teaching, basic

scientific research, and community services (Doğramacı, 2000; Gürüz et al., 1994). Universities have important tasks in the development and modernisation of societies from every aspect. Raising the qualified manpower needed by the society, performing pieces of research and investigation and publishing them, finding and explaining the ways of solution to various problems and presenting the views concerning the issues, and thus contributing to the scientific, technological and social development are among the tasks and responsibilities of universities (Işıksoluğu, 1993).

Research is basically a kind of searching, learning, transforming the unknown into the known, or shedding light to the darkness, or briefly, it is a process of enlightenment (Karasar, 2007a). The process can be divided into such stages as recognising the problem, predicting the recommendations of solution, developing the research method, collecting the data and analysing them, making decisions and interpreting the findings (Bailey, 1987; Cohen & Mabion, 1988; Mason & Bramble, 1978: quoted by Büyüköztürk et al., 2008, 7). In brief, research can be defined as the production of the new knowledge in certain processes.

In listing the basic properties of scientific education, the skill of describing and solving the problem, the skill of using the research techniques, and the positive attitudes towards the research come into prominence (Bektur et al., 1997; Yılmaz, 1997). It is possible for a contemporary person to have such a culture only through education; and such education is described as research education. Research education is the education which instills in individuals the scientific attitudes and behaviours and the competence in the field of research, and thus aims to raise the research consciousness in individuals and in the society. Raising individuals who produce the knowledge and who can share it, who are research oriented and who have scientific attitudes and behaviours is among the fundamental goals of educational systems (Ünal and Ada, 2007). Yet, although the research related properties of schools and individuals are emphasised in the relevant laws and regulations of Turkish system of education and raising research oriented individuals is targeted, research education seems to be sufficient neither in terms of content or method nor in terms of level (Saracaloğlu, 2008).

Instilling the research skills in individuals is an issue of education. The objective of this education is to raise individuals having research oriented attitudes and behaviours. Maintaining the research activities requires that - in addition to the compatibility of research environments- individuals and institutions to conduct the research have the capacity and the positive attitudes enabling them to do the research. Instilling the knowledge and skills is not a sufficient condition although it is an essential condition for an individual to perform research. It may be said that individuals' interest in the field, the values they hold, and even the fact that they do not consider this process as a threat to themselves are influential in their doing research (Saracaloğlu, Varol and Ercan, 2005).

Publications intending to establish the research consciousness and to develop the research qualities have increased recently, and courses related to research have been included in graduate and post-graduate programmes. Studies are available in literature stating that taking a course in research methods would enable teachers to do more research in their classes (Bard et al., 2000; Green & Kvidhal, 1990), would raise their levels of research self-efficacy (Lei, 2008; Saracaloğlu, Varol and Ercan, 2005; Unrau & Beck, 2004), individuals with high levels of research self-efficacy would be more interested in participating in research studies (Bard et al., 2000; Bieschke, Bishop and Garcia, 1996; Kahn & Scott, 1997) and thus research production would be higher (Krebs, Smither and Hurley, 1991; Phillips & Russel, 1994), and their research anxiety would be reduced (Lei, 2008; Unrau & Beck, 2004). Students who had taken a research methods course were found to have higher levels of research self-efficacy (Saracaloğlu, Varol, and Ercan, 2005; Büyüköztürk, 1996; Piburn, 1992).

When the constructivist approach is considered as the basis, it is important that the teachers - who are to facilitate research-investigation, problem-solving and critical thinking skills to the next generations – should themselves have such skills and capacities (Saracaloğlu, 2008). Therefore, it is an important part of the professional development of the students of educational faculties, who are going to become teachers in the future, to be able to distinguish research studies with scientific content, to be able to analyse them in accordance with the stages of analysis, to be able to criticise them, and to be able to do independent research (State Planning Organisation, 1993: quoted by Karasar, 2007b).

1.1. The Purpose and Significance of the Research

This study aims at examining educational faculty students' research self-efficacy according to a number of variables. For our purposes, the research problem was put as "does educational faculty students' research self-efficacy differ on the basis of universities, departments, gender, and whether they have taken the scientific research methods course?"

Due to the fact that only a limited number of research studies concerning the research self-efficacy of students attending the educational faculties of differing Universities are available, it is believed that this research will be useful to researchers.

2. Method

2.1. Type of Research

This research, which aims to analyse educational faculty students' research capacities in terms of a number of variables, was designed in the survey model. Survey models are the research approaches aiming to describe a past or present state as it is (Karasar, 2005).

2.2. Population and Sample

The research population was composed of all the Universities in Turkey. Yet, Amasya and Eskişehir Osmangazi Universities were chosen as the study population. The research sample was composed of 532 volunteering students attending the psychological Counseling and Guidance, Elementary School Mathematics Teaching, Science Teaching, and Computer and Teaching Technologies departments of the educational faculties of Amasya and Eskişehir Osmangazi Universities. The distribution of the research sample is shown in Table 1.

Table1. Demographic Distribution of Students Included in the Research Sample

		Girls		Boys		Total	
		f	%	f	%	f	%
University	Amasya University	145	62,5	87	37,5	232	100,0
	Eskişehir Osmangazi University	214	71,3	86	28,7	300	100,0
	Total	359	67,5	173	32,5	532	100,0
Department	Counseling and Guidance	85	64,4	47	35,6	132	100,0
	Elementary School Mathematics Teaching	91	65,5	48	34,5	139	100,0
	Science Teaching	112	72,3	43	27,7	155	100,0
	Computer and Teaching Technologies	71	67,0	35	33,0	106	100,0
	Total	359	67,5	173	32,5	532	100,0
Scientific Research	They have taken the course	184	70,8	76	29,2	260	100,0
	They have not taken the course	175	64,3	97	35,7	272	100,0

Methods	Total	359	67,5	173	32,5	532	100,0
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2.3 Data Collection

In order to determine the educational faculty students' research self-efficacy, a 43-item, 5-pointed Likert type "Scale of Research Competence" (Büyüköztürk, 1997), with a reliability coefficient of $\alpha=0,89$, was used. The scale contained the options of "completely", "to a large extent", "very little", and "none"; and they were scored between 1 and 5. the scores receivable from the scale were 43 at the minimum and 215 at the maximum. The high scores received from the Scale of Research Self-efficacy mean that the students are competent in the stages of "describing the problem, literature review, explaining-interpreting-reporting the method and the findings" of the research.

A separate Personal Information Form was not prepared in order to gather the information about the students. Instead it was considered appropriate to learn about gender, universities, departments and whether they had taken the scientific research methods course with 4 questions at the beginning of the scale.

In interpreting the arithmetic averages obtained in the Scale of Research Self-efficacy, the group interval coefficients were found by dividing the span between the lowest and the highest values assigned to the options (range) into the number of options (levels-groups). After dividing the span between 63-the lowest value- and 205-the highest value- obtained with the implementation of the Scale of Research Self-efficacy into the number of groups; the average values between 63 and 91 were regarded as "quite insufficient", the ones between 92 and 120 were regarded as "insufficient", the ones between 121 and 149 were regarded as "partly sufficient", the ones between 150 and 178 were regarded as "sufficient", and the ones between 179 and 207 were regarded as "quite sufficient" in terms of research self-efficacy.

2.4. Data Analysis and Interpretation

In line with the research purposes, the frequencies and percentages were calculated for the variables; and the one-way variance analysis (ANOVA) as well as the significance test for the difference between two averages (the t-test) were also employed. When there were differences between groups in consequence of the variance analysis, the Scheffé test was used so as to find between which groups the differences were available and to find in favour of which group the difference was.

Prior to the analyses, it was checked to see whether or not the data collected met the suppositions of the afore mentioned statistical methods, and it was concluded that those methods of analysis could be used.

3. Findings

The research problem was put as: "does educational faculty students' research self-efficacy differ on the basis of universities, departments, gender, and whether they have taken the scientific research methods course?" The students' scores of research self-efficacy were analysed through variance analysis and the t-test according to a number of variables, and the findings obtained are shown in Table 2.

Table2. The Distribution of Educational Faculty Students' Research Competence Scores According to a Number of Variables

Gender	N	X	S	sd	t	p
Female	359	151,3621	26,87146	530	0,854	0,393

Male	173	149,2543	26,21676			
Universities	N	X	S	sd	t	p
Amasya University	232	152,3017	30,06507	530	1,237	0,217
Eskişehir Osmangazi University	300	149,4200	23,65803			
Department	N	X	S	sd	F	p
Counseling and Guidance	132	155,4545	23,58236	528	22,849	0,000*
Elementary School Mathematics Teaching	139	144,5683	27,11357			
Science Teaching	155	141,9419	27,47968			
Computer and Teaching Technologies	106	165,5094	20,30728			
Scientific Research Methods	N	X	S	sd	t	p
They have taken the course	260	155,5923	24,03527	530	4,224	0,000*
They have not taken the course	272	145,9779	28,18821			

*: $p < 0,05$

As is clear from Table 2, the educational faculty students' research self-efficacy differs on the basis of department and whether they have taken the scientific research methods course whereas it does not differ on the basis of gender or university.

The research self-efficacy scores received by educational faculty students do not differ according to the university they attend. According to the results of the t-test, the research self-efficacy scores attained by Amasya University students were found to be higher than those attained by Eskişehir Osmangazi University students ($152.301 > 149.420$). However, the difference was not significant. This is a finding parallel to the one obtained by Saracaloğlu, Varol and Ercan (2005) who aimed to determine post-graduate students' research self-efficacy. Yet, research conducted by Büyüköztürk (1996) with graduate students found that research self-efficacy differed according to Universities. The cause of the difference was attributed to such facilities as university library and computer labs. In the case of this current research, however, it may be thought that no significant differences were available due to the fact that the graduate students had research experiences at the basic level and that they had similar research environments and research facilities.

Students' research self-efficacy differs according to the department they attend. Similar results were obtained in Büyüköztürk (1996) and in Saracaloğlu, Varol and Ercan (2005). The participants' research self-efficacy was analysed through one-way variance analysis according to the departments, and it was found to differ statistically significantly. In order to find the groups causing the difference, the Scheffe test was administered; and it was found that the two groups having no differences between were the Science Teaching students and the Elementary School Mathematics Teaching students. Significant differences were available for the students of all of the other departments. Thus, according to the results of the Scheffe test,

- The research self-efficacy of the Counseling and Guidance students was found to be higher than that of the Elementary School Mathematics Teaching students. The difference of average between them is 10.886, and the significance level is below 0.05 ($p = 0.006 < 0.05$)
- The research self-efficacy of the Counseling and Guidance students was found to be higher than that of the

Science Teaching students. The difference of average between them is 13.512, and the significance level is below 0.05 ($p=0.000<0.05$).

- The research self-efficacy of the Computer and Teaching Technologies students was found to be higher than that of the Counseling and Guidance students. The difference of average between them is 10.054, and the significance level is below 0.05 ($p=0.025<0.05$).
- The research self-efficacy of the Computer and Teaching Technologies students was found to be higher than that of the Elementary School Mathematics Teaching students. The difference of average between them is 20.941, and the significance level is below 0.05 ($p=0.000<0.05$).
- The research self-efficacy of the Computer and Teaching Technologies students was found to be higher than that of the Science Teaching students. The difference of average between them is 23.567, and the significance level is below 0.05 ($p=0.000<0.05$).
- There are no significant differences between Elementary School Mathematics Teaching students' research self-efficacy and that of Science teaching students'. The difference of average between them is 2.626, and the significance level is bigger than 0.05 ($p=0.850>0.05$).

Accordingly, the group with the highest level of research self-efficacy is the students of Computer and Teaching Technologies department while the group with the lowest level of research self-efficacy is the students of Science Teaching department. This can be interpreted as that the students of Computer and Teaching Technologies department are able to overcome the problems and difficulties encountered in the research process whereas the students of Science Teaching department have some inadequacies in relation to the research process.

The fact that the research self-efficacy of the students who had taken the scientific research methods course was found to be higher ($155.59>145.98$) shows that the self-efficacy is connected with the course. The research conducted by Saracaloğlu, Varol and Ercan (2005) and by Piburn (1992) also found that taking the research methods course affected the research self-efficacy. In the same way, Nartgün et al (2008) found that the self-efficacy perceptions of research of the prospective teachers who had taken the Research Techniques course were higher than those who had not taken the course. Thus, it may be stated that the research studies mentioned are supportive of this current study.

Besides it may also be said that gender is independent of research self-efficacy. Thus, in a number of studies (Bieschke, Bishop and Garcia, 1996; Bishop & Bieschke, 1998; Gelso, Mallinckrodt and Judge, 1996) it was found that research self-efficacy was not connected with gender.

In conclusion, it may be stated that the participants attain a "sufficient" level of research self-efficacy ($X=150.31$). Despite the fact that the findings of this research were seen to contradict with the ones obtained in various research studies (Büyüköztürk, 1996; Karagül, 1996; Karasar, 1984), the studies in question were at the graduate level. In research conducted by Nartgün et al (2008), where self-efficacy was analysed, it was found that the prospective teachers perceived themselves as "competent at the medium level". In this case, all of the studies mentioned are supportive of one another.

4. Discussion And Conclusions

This research has investigated the variables capable of influencing educational faculty students' research self-efficacy. The variables were established as gender, universities, departments, and taking or not taking the scientific research methods course.

The educational faculty students' research self-efficacy differs on the basis of department and whether they have taken the scientific research methods course whereas it does not differ on the basis of gender or university. This makes us think that such courses as scientific research methods, which raise students' research abilities, should be included in the programmes more extensively or that the number of weekly class hours should be increased.

It was found in this research that the students' research self-efficacy was at a "sufficient" level.

In line with the research findings, the following recommendations are made:

- Students should be made to do individual and group work, and be given research assignments/projects. In this

way, it may be possible to raise generations who research, question, produce and criticise.

- As is emphasised in Saracaloğlu, Varol and Ercan (2005), students can be made to prepare and exhibit their individual and group activities, and the successful research projects can be rewarded in various ways. For instance, those projects can be announced in ceremonies at the beginning or end of the semesters, and/or they can be publicised on the web pages of the universities or the students can be granted monetary prizes in this way, they can also be motivated.
- The weekly hours of the scientific research methods course and of similar courses which are influential in raising students' research self-efficacy can be increased, or it may be assured that courses with similar content are included in the syllabus.
- Field experts can be requested to hold seminars, conferences or such activities so as to increase students' research self-efficacy.
- Similar studies can be performed with different variables and different samples.
- Experimental or qualitative studies concerning the variables affecting research self-efficacy can be performed.

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An analysis of high school students' academic achievement and anxiety over graphical chemistry problems about the rate of reaction: The case of Sivas province

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Abstract

The study deals with the evaluation of the achievement of high school students concerning such topics as “reaction rate, reaction order, factors affecting reaction” which are included in the unit of “Reaction Rate and Chemical Equilibrium”, a part of chemistry program. To this, three measurement tools used as data collection tools; the “Achievement Test on Reaction Rate” (RRAT), the “Graphical Test on Reaction Rate (RRGT) and the “Anxiety Scale on the Use of Graphics” (ASUG) in chemistry problems. The participants of the study were 129 eleventh graders attending four Anatolian high schools in the province of Sivas. The study was carried out on one group. The findings obtained showed that the participants had higher mean scores in RRAT in contrast to those in RRGT. It was further found that the anxiety of the participants in regarding to the problems with graphics is higher. It was also determined that there is a statistically significant, negative and weak correlation between the student achievement in RRGT and the anxiety levels in regarding to the problems with graphics.

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Peer-review under responsibility of the Sakarya University.

Keywords: Reaction rate, achievement test on the reaction rate, graphics test on the reaction rate, anxiety scale for the use of graphics

Introduction

“A candle can remain without any reaction in air for a long time, but if it is burned with match it reacts. In a closed room, air and gas can be together without any reaction. However, if someone with a burning thing enters into the room, they both react and a violent explosion occurs. An iron bar slowly oxidizes in the air. All these reactions occur with oxygen. However, the rate of each varies significantly”.

Any people who can carefully observe the events recognize that some chemical reactions last for a short time, but the others last for a long time. It has been common among people to search for increase or decrease the rate of chemical reactions. The motivation for it is that the rate of reaction should be increased to have more productive, practical and economically advantageous. However, sometime the rate of reaction should be decreased for the similar reasons. For instance, the rate of food spoilage is made slow through putting them into fridge or through adding some preservatives. The indicators of the chemical reaction include heat exchange, color change, conductivity, gas outlet, deposition, pressure and volume change (MEB, No date).

There are many concepts in science that are not isolated and specified for one specific discipline. One of these concepts is the concept of rate, which has a broad use in many areas in science and mathematics. The term “rate” is

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often used to describe the change in a quantity that occurs per unit of time. Both in physics and in chemistry the meaning of rate is similar but the use and the terminology of this concept is different for each domain. For instance, in chemistry, the rate of a reaction can be defined as the change in concentration of a particular reactant or product per unit of time. On the other hand, in physics, the term “velocity” is used for displacement in a certain time, which also refers to the “rate” concept. One of the objectives of the Turkish secondary science (biology, chemistry and physics) curriculum is to establish links between physics, chemistry and other science fields in terms of key science concepts (MEB, 1998; 2007; Cited in Bektaşlı & Çakmakçı, 2011).

Rate of reaction as a highly structured topic is a central part of chemistry curriculum (Cachapuz & Maskill, 1987) and is an abstract chemical topic, which is also important in learning other fundamental chemical concepts such as chemical equilibrium. Therefore, comprehension of concepts with respect to rate of reaction and factors affecting it has a key role in learning of chemistry (Cachapuz & Maskill, 1987; Ragsdale, Vanderhooft & Zipp, 1998). Since understanding concepts related to reaction rate is crucial in learning other chemical concepts, appropriate teaching strategies should be designed by considering the results of their search about rate of reaction in the literature. Although extensive research related to chemical equilibrium has been carried out, research about students' understanding of rate of reaction concepts is limited (Justi, 2002; Cited in Kaya, 2011). Students have misconceptions, thus learning difficulties, in the subject of reaction rate (deVos & Verdonk, 1986; Justi, 2002). Students are required to conceptualize descriptive, particulate, and mathematical modeling regarding chemical kinetics and the interrelations between them in order to improve their understanding of reaction rate concepts (Çakmakçı, Donnelly & Leach, 2005). In addition, rate of reaction concepts is an essential prerequisite for some chemistry concepts, especially chemical equilibrium. In educational research, although there has been substantial research on students' understanding of chemical equilibrium concepts, there is limited research related to students' understanding of rate of reaction concepts. (Gorodetsky & Gussarsky, 1986; Van Driel, 2002; Çakmakçı, 2005; Çalık, Kolomuc & Karagölge, 2010; Cited in Kaya & Geban, 2012).

There are very little data available on how understanding of chemical kinetics progresses as students move through the curriculum. It is intended that this study will provide empirical evidence about students' understanding of chemical kinetics. Since students experience difficulties in understanding in chemical kinetics both at school (De Vos & Verdonk, 1986; Justi, 2002) and university level (Lynch, 1997), further research is required in order to give insights into the ways in which students conceptualize chemical kinetics at school and university level (Çakmakçı, Donnelly & Lynch, 2005).

Research on students' understanding of rate of reaction documented following conceptual difficulties; in ability to define the rate of reaction (e.g. defining reaction rate as reaction time), difficulties in explaining how reaction rate changes as there action progresses (Çakmakçı, Leach & Donnelly, 2006; Çalık, Kolomoç & Karagölge, 2010), misunderstandings of the relationships between temperature change and the rate of reaction (Çalık, Kolomuc & Karagölge, 2010; Justi, 2002; Quilez-Pardo & Solaz-Portoles, 1995; Van Driel, 2002), misunderstandings of the relationships between concentration change and the rate of reaction (Cachapuz & Maskill, 1987; Çakmakçı, Leach & Donnelly, 2006; Sözbilir, Pınarbaşı & Canpolat, 2010), misunderstandings of the effect of a catalyst on the rate of reaction and on the mechanism of their action (Çakmakçı, 2009; Hackling & Garnett, 1985; Taştan, Yalçinkaya & Boz, 2010), and having conceptual difficulties in interpreting empirical data and graphical representation (Cited in Çakmakçı, Leach & Donnelly, 2006).

Anxiety is a feeling of fear and worry. In case anxiety starts to affect and individual's life quality, this could be considered as anxiety disorder (Uçar, 2004). Research on there a sons for anxiety mainly focuses on the state of feeling that experience during uncertain and uncontrollable situations. It is also individuals considered as a factor reinforcing anxiety when individuals lack some knowledge during knowledge processing process and considers this situation the sign a potential disaster. Students experience anxiety in various less on due to various reasons during their education years. These anxieties might affect their learning positively or negatively. Students tend to have anxieties through the utilization of graphs in teaching the relations between concepts in Chemistry. Chemistry is a field of science analyzing all substances found in nature. The laws are expressed through a mathematical language in chemistry. Mathematics is a tool frequently made use of in expressing the laws, solving problems and expressing

problems. Graphs are quite commonly utilized in chemistry in preceding these functions. In evaluating the relationship between concepts, in expressing the directions and sizes of these relationships, in organizing and summarizing data, graphs are effectively utilized tools. Graphs make it easier for us to see the relationship amongst the large datasets. They are also useful in displaying the relationships that are difficult to express in numbers. For solving the arithmetical and algebraic problems, graphs are functional tools (Beichner, 1994; Ersoy, 2004; McKenzie & Padilla, 1986; Padilla, McKenzie & Shaw, 1986). The literature was observed to contain various studies on using, understanding and interpreting graphs. Students do not only need to have the three skills in order to interpret, draw and organize graphs but also need to overcome these challenges. The lack of performing these skills or failing to overcome these challenges may cause students to develop anxieties towards using graphs. Similarly, students' existing anxieties towards using graphs may prevent the emerging of these skills or rein force the emerging of the challenges (Cited in Seçken & Zan, 2013).

The study aims at measuring the basic knowledge and skills about the reaction rate of 129 high school students attending the eleventh grade of four different Anatolian High Schools in Sivas. In addition, the performance of the participants in regarding to the problems with or without graphics was analyzed and their anxiety level about the problems with graphics was determined. Based on these aims, the study attempts to answer the following research questions:

- 1) Is there any statistically significant difference between student's achievement scores in RRA test and those in RRG test?
- 2) What is the level of student anxiety in regarding to the chemistry problems with graphics about "the rate of reaction"?
- 3) Is there any statistically significant correlation between students' scores on the "RRGT" and their anxiety level in regarding to the problems with graphics?

Method

.1. Participants

The participants of the study were 129 eleventh graders attending four Anatolian high schools in the province of Sivas.

.2. Data collection tools

.2.1. Achievement test on reaction rate (RRAT)

The RRAT, designed to evaluate the knowledge of students about the rate of reaction, is made up of 25 multiple-choice items. More specifically, the test measures the knowledge and skills about "measure of the reaction rate, collision theory, activation theory, reaction heat, reaction mechanism and the formulas and degrees of rate, and the factors affecting reaction rate". RRAT involves the chemical problems, which do not include any graphics and which attempt to evaluate the knowledge and comprehension about the rate of reaction. It was developed by the authors and was used in a pilot study with the same level 95 students. The analyses showed that its cronbach α reliability coefficient is 0,78.

.2.2. Graphical test on reaction rate (RRGT)

The RRG T was also developed by the authors and involves those chemical problems on the rate of reaction with graphical representation. Its original version was made up of 15 multiple-choice items. These items attempt to

evaluate the students' skills in regarding to practice and analysis. It was used in a pilot study with the same level 95 students other than the participants of the study. The results of validity and reliability showed that four items should be eliminated from the test, leading to the one with eleven items. The cronbach alpha reliability coefficient was found to be 0,697.

.2.3. Anxiety scale on the use of graphics in chemistry courses (ASUG)

This scale developed by Seçken ve Zan (2013) was used to measure the anxiety level in regard to deal with the chemistry problems with graphics. It was used in a pilot study with the same level 95 students other than the participants of the study. The factor analysis showed that it has one dimension and its cronbach alpha reliability coefficient was found to be 0,935.

Findings

In regarding to the first research question, is there any statistically significant difference between student's achievement scores in RRA test and those in RRG test, t-test was used. The findings obtained are given in Table 1.

		Paired Differences			95 % Confidence Interval of the Difference		t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error	Lower	Upper			
Pair 1	RRAT-RRGT	4,618	3,00635	,26469	4,09447	5,14196	17,447	128	,000

Table 1. Results of t-test to compare student's achievement scores in RRA test and those in RRG test.

RAs can be seen in Table 1, there is a statistically significant correlation between student's achievement scores in RRA test and those in RRG test ($p < 0.05$). The direction of this correlation in favour of the scores in the RRA. In other words, the mean scores of the students in RRAT are higher than those in RRG.

In regarding to the second research question, What is the level of student anxiety in regard to the problems with graphics about "the rate of reaction" the answers of the participants to the ASUG were analysed in terms of percentage and frequency. The results are given in Table 2.

Table 2. Percentages and frequencies of the answers to the anxiety scale on the use of graphics in chemistry problems

ITEM NO	Frequency	Percent
1) I have difficulty in interpreting the lines on a graphic.	1	11
	2	39
	3	34
	4	30
	5	15

2) I could not interpret the increases or decreases in the curves included in the graphs	1	22	17,1
	2	55	42,6
	3	27	20,9
	4	18	14,0
	5	7	5,4
3) I wish there was a way to achieve in chemistry without interpreting questions with graphs.	1	15	11,6
	2	29	22,5
	3	24	18,6
	4	38	29,5
	5	23	17,8
4) Before an important test, during a test or when studying for a test I think that some of my friends have less difficulties than I do	1	33	25,6
	2	39	30,2
	3	22	17,1
	4	17	13,2
	5	18	14,0
5) I think that graphical questions are a way to make sense the theoretical knowledge.	1	30	23,3
	2	37	28,7
	3	23	17,8
	4	20	15,5
	5	19	14,7
6) I feel anxious before the exams that questions with graphs may come up.	1	13	10,1
	2	35	27,1
	3	30	23,3
	4	31	24,0
	5	20	15,5
7) Chemistry topics with too many graphs do not attract me.	1	19	14,7
	2	33	25,6
	3	20	15,5
	4	34	26,4
	5	23	17,8
8) My anxiety towards failing to interpret questions with graphs affects my achievement in exams.	1	23	17,8
	2	44	34,1
	3	20	15,5
	4	27	20,9
	5	15	11,6
9) I can't sleep because of the thought that I will have to respond to questions with graphs.	1	65	50,4
	2	30	23,3
	3	14	10,9
	4	7	5,4
	5	13	10,1
10) When solving a chemistry problem with graphs or interpreting it, I feel like I	1	11	8,5

am making mistakes.	2	26	20,2
	3	37	28,7
	4	35	27,1
	5	20	15,5
	1	34	26,4
11) When I face a question with graphs, I experience a fail or right at the beginning.	2	37	28,7
	3	24	18,6
	4	23	17,8
	5	11	8,5
	1	13	10,1
12) If I manage to interpret questions with graphs, my self-esteem will improve.	2	31	24,0
	3	21	16,3
	4	41	31,8
	5	23	17,8
	1	10	7,8
13) I cannot be sure of my decisions in interpreting graphic questions.	2	25	19,4
	3	31	24,0
	4	39	30,2
	5	24	18,6
	1	19	14,7
14) When talking about graphic questions, I think of difficult questions to explain.	2	40	31,0
	3	31	24,0
	4	21	16,3
	5	18	14,0
	1	31	24,0
15) I have difficulty in understanding when my teachers interpret graphs.	2	45	34,9
	3	19	14,7
	4	24	18,6
	5	10	7,8
	1	31	24,0

As seen in Table 2, some of the student answers indicate higher levels of anxiety over the chemical problems with graphics. For instance, 39.5% of the participants stated that they agreed or totally agreed with the sixth item, namely, "I feel anxious before the exams that questions with graphs may come up." Similarly, the rate of the students who agreed or completely agreed with the seventh item, "Chemistry topics with too many graphs do not attract me." was found to be 44.2%. The rate of the students who agreed or completely agreed with the tenth item, "When solving a chemistry problem with graphs or interpreting it, I feel like I am making mistakes", is 42.6%. With regard to the twelfth item, "If I manage to interpret questions with graphs, my self-esteem will improve", the rate of the students who agreed or completely agreed with it was found to be 49.6%. The rate of the students who agreed or completely agreed with the thirteenth item, "I cannot be sure of my decisions in interpreting graphic questions", was again higher, specifically 48.8%. In all instances, it is observed that the self-esteem of the participants in answering graphical problems is lower. However, the findings also indicate that when someone explains such problems, the participants do not experience any difficulty in dealing with the graphical problems.

In regarding to the last research question, namely “Is there any statistically significant correlation between students’ scores on the “graphical test of reaction rate” and their anxiety level in regard to the problems with graphics?” correlation analysis was employed to reveal the direction and magnitude of the potential correlation. The results of the correlation analysis are given in Table 3.

Table 3. Results of the correlation analysis over the correlation between the RRG T achievement and anxiety scores

		RRGT	ASUG
RRGT	Pearson Correlation	1	-,419(**)
	Sig. (2-tailed)		,000
	N	129	129

** Correlation is significant at the 0.01 level (2-tailed).

As can be seen in Table 3, the results of the correlation analysis indicates that there is a statistically significant negative but a weak correlation between the students’ RRG T achievement scores and their level of anxiety.

Conclusions

The study aims at measuring the basic knowledge and skills about the reaction rate of 129 high school students attending the eleventh grade of four different Anatolian High Schools in Sivas. In addition, the performance of the participants in regarding to the problems with or without graphics was analyzed and their anxiety level about the problems with graphics was determined.

The findings concerning the first research question showed that the mean achievement scores of the participants from the RRAT, which included 25 multiple choices and non-graphical items, are higher than those from the RRG T, which included 15 multiple choice and graphical items. This finding also supported the findings concerning the second research question, which dealt with the anxiety levels of the participants about graphical chemistry problems. The answers of the participants to the ASUG indicated that their level of anxiety in this regard is higher. Most of them reported that they do not have any interest in graphical themes such as under the unit of the rate of reaction and chemical equilibrium and that they have anxiety in drawing or interpreting graphics in the exams due to making mistakes. Therefore, it is natural that the participants have higher scores in the RRAT, which does not include graphical problems. In the study, it is also found that there is a significant but weak correlation between the mean achievement score in the RRG T and their level of anxiety over graphical problems. It means that their achievement in the RRG test becomes higher and their level of anxiety somewhat decreases. It is the goal of all educational programs and activities.

Any international or national study was not found the findings of which support the current findings. Some research on teaching and learning of chemical equilibrium have focused on students’ conceptions related to chemical equilibrium (Wheeler & Kass, 1978; Hewson & Hewson, 1984; Hackling & Garnett, 1985; Quilez-Pardo & Solaz-Portoles, 1995; Van Driel, 2002), some have focused on students’ frameworks in chemical equilibrium (Gussarsky & Gorodetsky, 1990; Maskill & Cachapuz, 1989), some have dealt with students’ usage of Le Chatelier’s principle (Banerjee, 1995), and some have investigated this subject from quantitative aspects (Hackling & Garnett, 1985; Huddle & Pillay, 1996).

Studies concerning the rate of reaction and chemical equilibrium in Turkey are mostly dealt with the students’ understanding, views, comprehension or misconceptions (Çakmakçı, Donnelly & Leach, 2005; Çakmakçı Leach & Donnelly, 2006; Çalık, Kolomuç & Karagölge, 2010; Taştan, Yalçınkaya & Boz, 2010; Kaya, 2011; Kaya & Geban, 2012).

Suggestions

Based on the findings, the following suggestions are developed:

1. The data with the same measurement tools can be collected from the students attending other high school types.
2. Interventions to decrease anxiety could be carried out in regarding to those topics about which students have higher levels of anxiety.
3. Activities to improve student achievement about the rate of reaction can be done.
4. Misconceptions about the rate of reaction can be revealed and eliminated or reduced.

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An analysis of mathematics curriculum at secondary level

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Abstract

The aim of this study is to analyze the Mathematics teachers' opinions about secondary education mathematics program (9-12 classes) which has been applied since 2005-2006 academic year by Ministry of Education. The study group of this research is 28 mathematics teachers who have already graduated and still make their profession at different educational institutions. To analyze the opinions gathered from prospective teachers' descriptive method is used. According to the findings of research the deficiencies and mistakes are emphasized. Suggestions for improving the secondary education mathematics programme are offered.

Keywords: Mathematics lesson, secondary education Mathematics program, Mathematics teacher, teacher opinion

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Appendix A. Introduction

Mathematics curriculum at primary level, which was prepared in 1983, was accepted with the name of Primary Education Mathematics Curriculum by means of the decision taken by Turkish Education Board in 1998 (Delil and Güleş 2007). At the beginning of 2004–2005 educational year, primary education mathematics curriculum was renewed in line with the constructivist educational approach, which is based on a student-centered understanding while the curriculum started to be implemented at the II. Level during the 2006-2007 educational year.

Mathematics curriculum, weight and teaching process and high level mental skills and innovation to bring a positive direction, gains, earnings between the pattern. To that positive direction, and innovation, in the pattern between gains to delta measurement and evaluation activities in terms of problem-solving skills deficiencies (Baykul 2005) and were stated that there could be problems because of crowded classes, positive relation between, work load of teachers, using technology, the class of problems due to physical conditions and lack of knowledge of teachers in the implementation of the curriculum (Özdaş, Tanışlı, Köse ve Kılıç, 2005). (Akt. Ünsal 2013)

1.1 The Vision of the Curriculum

It is stated that mathematics, which is described as the science of patterns and systems, fosters abstract and quick thinking as well as creative and aesthetics development; in other words, mathematics plays a crucial role in bringing up people needed by the knowledge society (Baykul, 2005).

It depends on the main idea called as «All children can learn mathematics.» However, the concepts related to mathematics, which is abstract, are needed to be gained through concrete activities or fictionalized life models. The idea that «learning mathematics is a rich and comprehensive process» is adopted within the curriculum. When

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considered from this point of view, it should be emphasized that it is important and necessary to bring up individuals who can use mathematics in their lives, solve problems, share their solutions and ideas, work co-operatively, have self-confidence about mathematics and develop positive attitudes towards mathematics (Delil and Güneş, 2007).

.2. Aim of The Study

This study aims to analyze the views of mathematics teachers about mathematics curriculum at secondary level which has been implemented since 2006-2007 educational year in terms of the goals of mathematics curriculum at secondary level as well as the activities determined to reach the pre-determined goals and the dimension of assessment and evaluation. This study also includes some suggestions related to the received data for researchers in order to contribute to the development of the curriculum.

Method

2.1. Research Model

This study is a descriptive research as it aims to display the current situation exactly while qualitative research pattern has been used to carry out this study.

2.2. Study Group

The method of easily accessible sample has been used in this study. 28 volunteering teachers who work at various state schools have participated in the study.

- Nine of the teachers have expressed their views related to the curriculum of 9th grade,
- Seven of the teachers have expressed their views related to the 10th grade,
- Six of the teachers have expressed their views related to the 11th grade,
- Six of the teachers have expressed their views related to the 12th grade.

2.3 Data Collection

As the data have been collected through the method of interview, «semi-structured interview form» has been used. Expert opinion has been made use of for the validity and reliability of this form. The data have been analyzed by two researchers and the findings have been described in detail.

2.4. Analysis of Data

The data received through interviews have been interpreted by means of carrying out content analysis. The similar data have been gathered within the framework of basic concepts and categories while they have been interpreted by two different people after being organized meaningfully. Some of the interviews have been quoted in order to support the interpretations.

Results

As a result of the findings gathered at the end of the study, the main themes have been determined to be; The basic philosophical approach on which the curriculum is based, learning approach, setting the goals, educational status and evaluation.

The Basic Philosophical Approach on Which the Curriculum is Based

The teachers have stated a common view that mathematics curriculum at all grades are based on the philosophy of progressivism. The educational philosophy of progressivism can be described as the approach of pragmatism reflected upon and adopted to education. Change is accepted to be the core of reality within pragmatism.

Learning Approach on Which the Curriculum is Based

All the teachers have expressed that mathematics curriculum at all grades are based on the learning approach of «constructivism.» Constructivism means that knowledge is constructed mentally by the learner. When the learner integrates the previous knowledge with the new one, a meaningful learning comes out. As Ersoy stated previous education programs which were prepared by The Ministry of Education adopted and stereotyped behavioral approach, but general framework and structure with elements of cognitive science approach, point of view, expectations and processes have been preferable, in this context, content coerce the learning areas some arrangements have been made.

Learning at each grade level and subject being tracked in a conceptual approach, the development of mathematics concepts and relationships are highlighted, sample handling issues is an attempt to reflect on the ideas mentioned. Conceptual approach, as it is known, to the creation of the conceptual foundations of mathematics-related information to allocate more time; thus establish relations between conceptual and procedural knowledge is required. Students effectively doing the math problem solving, solutions and share their thoughts, they also learn to relate to other areas

Setting the Goals

The goals of the mathematics curriculum at 9th, 10th, 11th and 12th grades are mostly at the level of perception. Goals addressing implementation as well as perception are also included in the curriculum. The teachers who have examined the curriculum at each grade have expressed that some of the goals are at the level of perception and implementation simultaneously and they have added that this does not comply with the principle of writing a goal which prescribes that:

“The goals should be comprehensive but also limited at the same time. While the goals should express a group of behaviors on one side, they should also refer to a single quality on the other side.»

Arranging the Educational Status

The general view related to each grade states that the goals are mostly in compliance with the activities, however the number of activities and examples are not sufficient. The examples should have a nature that improves students' imagination. According to the teachers, while the examples are few in number, they are clear and understandable. The activities should be prepared in line with the implementation and daily life. Teacher D3 emphasize it as;

“The subjects should be associated with the daily life and they should be dealt more concretely and joyfully.”

The overall objective of mathematics courses, where students not only to provide information to recite the developed program to support literacy learning in the field of mathematics are provided. These learning areas involve basic math concepts, transaction information and rules, contains elements of mathematical language, etc. Mathematical thinking, reasoning and forecasting, problem solving, attitudes, values which are necessary for mathematical literacy were taken into account, as well as other skills. In particular, making a prediction and approximate calculation is different than in previous curriculum (Ersoy 2006).

Evaluation and Assessment

It is emphasized that evaluation should focus on implementation rather than memorization. In general, the teachers have expressed that the dimension of evaluation and assessment has deficits and it should be improved. Teacher I5: *“Evaluation should eliminate the problem of ‘Where will we use it?’»*

Evaluation process should prevent the question “what will it work for?” Evaluation shouldn't assess memorizing, it should assess applicable information.

4. Discussion

The updated curricula are taking serious steps about supporting students' multi-dimensional development and establishing the infra-structure of transfer from «passive learner» to «active learner» in society. It has been emphasized and suggested that during student-centered activities of teaching mathematics, concrete and cognitive means should be used in visualizing mathematical concepts and ensuring them to be understood, in deepening learning and using what is learnt in solving real-life problems.

As mathematical concepts are interrelated with each other through a tight relation of prerequisite, it is necessary to carry out studies of evaluation such as oral and written exams, observations, discussions, interviews, presentations, experiments, exhibits, projects, files of development and improvement, self-evaluation, peer-evaluation in order to prevent the malfunctions that may arise (Delil and Güneş, 2007). It is important to integrate different methods of evaluation in order to ensure that the curriculum is implemented successfully.

5. Suggestions

It is more important to adopt and implement the curriculum than to develop it. And this require patience and effort of all the shareholders of education. In the following studies, the curriculum at each grade can be analyzed separately and thus more detailed data can be gathered. The results can be supported by means of receiving the opinions of curriculum development specialists as well as teachers' opinions related to mathematics curriculum. Data related to the mistaken or insufficient aspects of the curriculum can be gathered by means of receiving students' opinions about how mathematics lessons are implemented. A comprehensive study of «curriculum evaluation» can be carried out.

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An analysis of unemployment due to number of university graduates in the Slovak republic

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Abstract

The article is dedicated to situation of young people entering labour market which is too complicated nowadays. The article also deals with interpreting the statistical results about unemployment of university graduates and shows the duration of graduate unemployment in particular periods. The next part of the article shows the number of births in a population in a certain amount of time. These numbers are compared to the number of public university graduates in last years. The main aim of the paper is to analyse certain available statistical data due to unemployment and demographic development and interpret them.

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Peer-review under responsibility of the Sakarya University.

Keywords: Unemployment; university, graduates; labour market

Introduction

In general, unemployment is very difficult issue for whole society. Despite of a few positive trends in unemployment development, it is still difficult problem from the economic and social point of view in Slovakia. Nowadays we can see an increasing trend in young people to maximizing the level of their education. The raising of population's education level is important impact for policy of most European countries and the result of that is continually increasing number of university graduates. Of course there is no doubt why it should be wrong. But we can see this fact also from the other side, from side of labor market.

The labour market success of university graduates is considered as one of the most serious system problem and it has strategic importance for continuous development of education and also for efficiency of economic development. This implies that problem of using educational attainment, unemployment and also other aspects of this problem have cross-resort character and the influence of Ministry of education on solving them is significant.

Creating feed-back between universities, government, labour market and business environment is necessary also in term of coherence between student preparation, future graduates of certain universities with actual needs and requirements of national economy.

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Situation in the Slovak republic – development of demography and university graduates*.1. Analysis of statistical data – demographics, university graduates*

In the table 1 we can see the number of births during the period 1979-1989 in the Slovak republic. The table and the figure show that the number of births has decreased trend. In table 2 we can see the number of graduates on public universities. As we can see for example in 2003 the number of graduates on public universities was only 17868. In 2013 the number was 37348. During 10 years the number increased more than twice. Now we can conclude that with decreasing number of births the development of graduates on public universities in Slovak republic has increasing trend.

Table 1. The number of births in certain years in the Slovak republic

Year	The number of births
1989	80116
1988	83242
1987	84006
1986	87138
1985	90155
1984	90843
1983	92053
1982	92618
1981	93290
1980	95100
1979	100240

Table 2. The graduates development on public universities in the Slovak republic

Year	The number of graduates
2013	37348
2012	38367
2011	40158
2010	41843
2009	41187
2008	34431
2007	23990
2006	20628
2005	20762
2004	19134
2003	17868

Now we compare these numbers to find out what percentage of population year has graduated on public universities in the Slovak republic. To certain years in table 1 we assign the certain data from table 2. For example we consider that in 2013 graduated people who were born in 1989. As we can see in Figure 1 and Figure 2 the number of births had decreased character in years 1979 – 1989. But the most important fact for us is that the number of public university graduates continually increased. The largest increase of students who has graduated from the public universities was between years 2007 and 2008 when the number increased from 23 990 to 34 431.

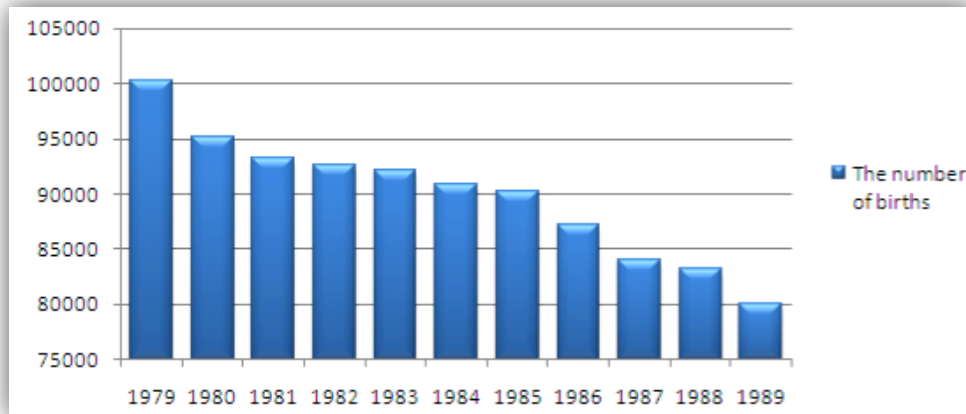


Fig. 1. The number of births in Slovak republic in certain years

According to the figure 3 it is clear that from 2003 rapidly increased percentage of public university graduates. This fact is bewildering mainly because many of graduates can't find job after finishing the university. There are many causes why we have to face this situation. These are some of them:

- Financing of higher education.
- The number of public universities in the Slovak republic.
- Structure of study programmes.
- Low continuity with business environment.

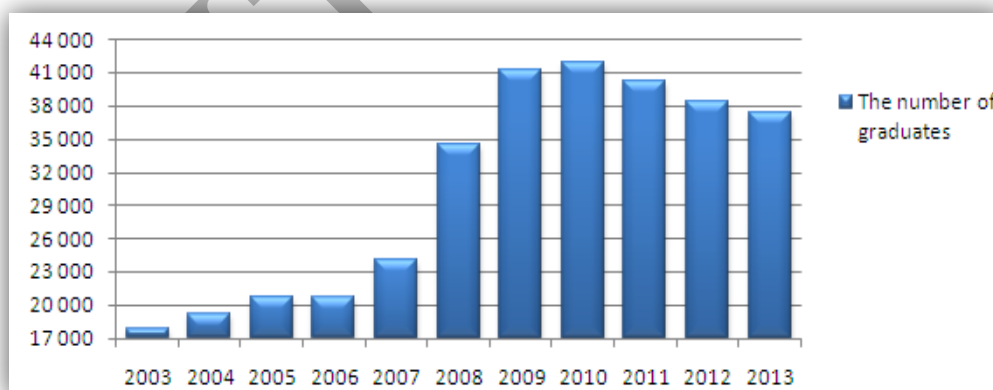


Fig. 2. The development of graduates on public universities in Slovak republic in last 10 years

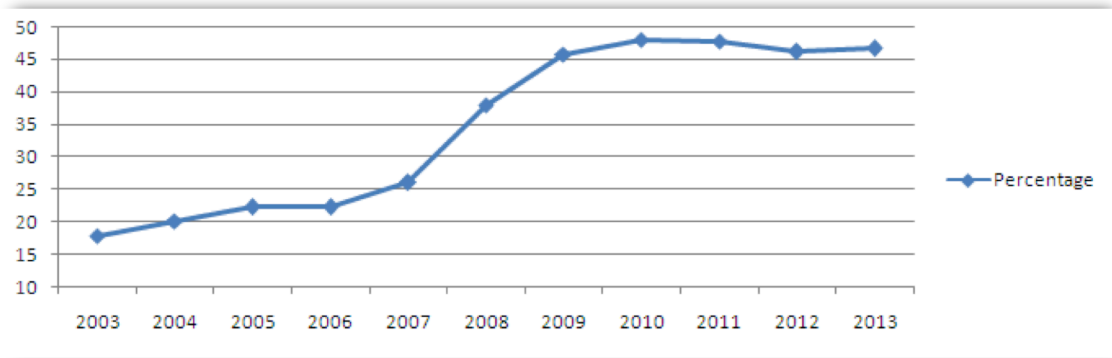


Fig. 3. The development of number graduates on public universities according to population year.

.2. Unemployment of young people

It is necessary to say that the increase of young people on labour market today is rapidly lower than it was for example in 1993 or 1994. So let's look on an unemployment situation and compare two periods. The period of years before 20 years and nowadays. The level of unemployment is relatively same in both of periods. This fact is shocking because if the increase of young people on labour market today was the same as it was before 20-25 years we had to face the rapidly higher unemployment approaching to 25 % as we can see in certain countries of European union for example Greece, Italy, Spain. In these countries was demography of 90 ' s years completely different. When we are talking about demography, very important fact is that Slovakia and Greece have the worst demography in crisis according to the statistics of Eurostat.

The EU is trying to reduce youth unemployment and to increase the youth-employment rate in line with the EU target wider of achieving a 75% employment rate for the working-age population (20-64 years). Youth unemployment across the European Union remains unacceptably high, to the detriment of current and future generations. Addressing it requires understanding its causes and then relentlessly pursuing solutions. The problem of youth unemployment in the European Union is not new. Youth unemployment has been double or even triple the rate of general unemployment in Europe for the last 20 years. The events of the past few years have dramatically exacerbated it, however: 5.6 million young people are unemployed across Europe, and a total of 7.5 million are neither being educated nor are they working. Moreover, while young people are eager to work, more than half of those without jobs say they simply can't find one—all while businesses across Europe insist they struggle to find young people with the skills they need.

.3. Development of an unemployment in the Slovak republic

Today's the pool of unemployed graduates is rising to worrying levels in the region generally – and even in some high-growth economies. Of particular concern is whether high graduate unemployment is a temporary blip or reflects a chronic oversupply of graduates, even as many employers say they cannot find people with the right skills.

Slovakia suffers from one of the highest youth unemployment rates in the European Union. In order to address the problem, the cabinet of Prime Minister Robert Fico has responded to an initiative launched by EC President José Manuel Barroso and proposed to re-allocate EU structural funds away from programs such as IT and education and towards tackling youth unemployment and boosting economic growth. The plan has attracted criticism from the opposition, which is calling for a more systematic solution.

Table 3. The statistical results about unemployment of public university graduates

September/year	Registered unemployed (university graduates)	Total number of university graduates	%
2013	9630	37 348	25,78
2012	4877	38 367	12,71
2011	6811	40 158	16,96
2010	6460	41 843	15,44
2009	6139	41 187	14,91
2008	2903	34 431	8,43
2007	2958	23 990	12,33
2006	2771	20 628	13,43
2005	2603	20 762	12,54
2004	4418	19 134	23,09
2003	5294	17 868	29,63

A typical feature of graduate unemployment is a significant cyclical character. The number of university graduates in unemployment evidence is the highest in the month of September each year. In other months the number continually decreases until the April and May of the following year. In June, July and August the number growth again to the point of culmination in September. This situation is mainly because of finishing stadium at our universities. On labour market enter high number of young people who have just left school gates and start to find a job. Labour market is not able to absorb the growth of young workforce which results in rapid increase of the total monthly volume of unemployed.

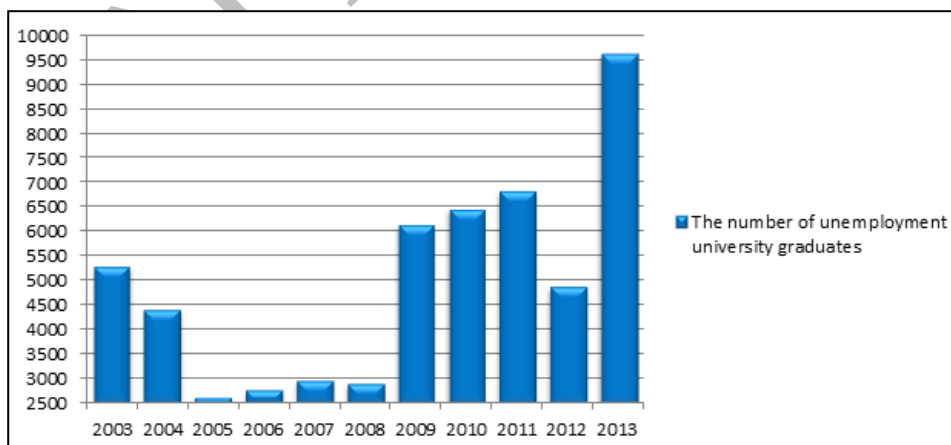


Fig. 4. The level of university graduates unemployment in September of each year

Conclusion

Young people have been hardest hit in the labour market during the economic crisis. It is needed to be strong efforts to reduce youth unemployment and to promote young people's participation in the labour market. Member States should secure school-to-work transitions for young people and develop and implement Youth Guarantee schemes. Currently, more than one in five young people available for the labour market cannot find a job. Many of them may decide to prolong or return to studying and to invest in their future employability. There is also a large number of young people neither working nor studying. Being unemployed at a young age has a long-lasting negative impact, a 'scarring effect'. Young people might be trapped in the lower end of the labour market, with less on-the-job training, lower wage levels and weaker long-term employment and career prospects, consequently experiencing long spells of joblessness and facing a high risk of exclusion. Young people aged 25-29 with higher education also find it harder to access jobs in line with their qualifications. Although the low-skilled overall still face the highest risk of unemployment, the young highly skilled have suffered the biggest drop in employment.

Slovakia has one of the highest youth unemployment rates in the EU. It serves as an example of a country where half-hearted measures have failed in the absence of a proper active labour market strategy to channel the young into meaningful jobs. Unemployment is a big problem for the economy. Not only is it a severe personal blow to those concerned, but it is also an economic waste. Slovakia needs the solutions which could manage the status of graduates on labour market. One of another problem that we are facing now is leaving our country by graduates which could not find a job. They leave and try to find job in other countries of European Union, in countries where they have more opportunities and better conditions. And finally they don't want to come back.

Grant support

This contribution was undertaken, as parts of the research projects: VEGA 1/0748/14 – Research methods of the organisation project aims financing in a competitive environment and KEGA 052ŽU-4/2012 On-line learning management in the process of ICT education

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An application regarding the availability of mind maps in visual art education based on active learning method

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Abstract

This study is conducted in order to inquire about the availability of mind maps in Visual Arts Education lessons which are performed based on active learning methods. It's applied on 3rd grade students taking course of Special Education Methods lesson in Marmara University Ataturk Education Faculty Fine Arts Education Department. 20 students who have similar success averages are selected from 40 people classroom as 10 of them for group control and 10 of them for experimental group. Traditional method is applied to control group and active learning method is applied to experimental group. At the end of the course, mind maps are applied as a final test on both groups. In this research, content analysis and semi-experimental methods are used. The mind maps are finalized by coding, students' opinions are taken.

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Peer-review under responsibility of the Sakarya University.

Keywords: Visual Arts Education; Mind Map; Active Learning Method

Introduction

Recently, it can be seen that students in primary and secondary actively participate in the learning process of education in our country. The reason for this different is that teaching methods and techniques have been replaced in almost every course. If we look at visual art education classes today still continue to use traditional learning methods, in which the teacher is in the center, devoid of artistic culture, only do the practical work. The application studies which have been done without question as only for homework are seen as not satisfactory by today's students which grows very versatile. Firstly, knowledge is required for occurrence of creative imagination and to do original work. Student who established infrastructure with the knowledge will be willing and will reveal more original and creative work. He will be able to question and express the intellectual dimension of the resulting jobs. Therefore, visual arts education classes should be carried out with the theory and practice work by supporting each other along. Theoretical knowledge will create a art culture and he will be able to use this information in future life.

To ensure retention of knowledge in visual arts education classes it is required to support the content of the lesson with the application and it should be used student-centered active learning methods, pre-test and post-test. Considered in this way in a course, the student will take note of the information to make permanent. Note-taking is one of the mind maps in visual arts education courses use both verbal and visual skills important and can take

* This research has been supported by Marmara University Scientific Research Project Committee under Project number EGT-D-120514-0208

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place in a fun way.

Mind mapping was developed for the first time as a note-taking technique by Buzan who is a mathematician, psychologist and brain researcher. Buzan express that mind map is used as an attempt to improve their mental strength. (Yumuşak, 2013)

According to Townsend (2003); right - left-brain connection made mind maps as highly effective technique. Our ability to learn increases as long as two hemispheres of the brain work in harmony. If one has difficulties in learning, this is usually caused in not connection with each of the two halves of the brain. When left and right halves of the brain communicate better, information can be learned and remembered much more with the current situation. (Karadeniz, Tangülü, Faiz, 2013)

According to Trevino, when viewed from this perspective, the mind map technique that will allow students to learn while having fun can be as modern and effective techniques; technical implementation of the use of colors and pictures can be effective in ensuring the permanence of the information. (Şeyihoğlu, Kartal, 2013)

These techniques ensure that students develop a positive attitude towards the lesson of the next, the application is easy and fun for teachers may be an alternative technique (Buzan 2009).

Traditional note taking method consists of sentences. In the method of note-taking with mind maps, it is formed by key words, symbols, images and words which are composed of arms of the main themes. It is a summary of information formed with keywords. Does not consist of sentences, it is a conversion of our mind to figures, pictures and words. It should be formed by pictures and symbols. This case is important for the development of mental abilities.

There are four important characteristic of mind mapping

1. Attention to topic is provided by a central picture.
2. The main themes of the subject spread from the branches of the picture in the center.
- 3 Branches contains pictures or words written on the lines associated with a key.
4. There is a structural relationship between the branches. (T. Buzan, B. Buzan, 1994)

Due to these characteristics when making mind maps there is a movement from all to the parts. When creating the main concept and parts separated from it, a previously unnoticed connection between them can also be detected.

It is possible to express that this method opens the brain to learning by ridding obstacles such as monotony, frustration and poor self-esteem and also allows the concentration and creativity. (Shafer, 2003)

Mind mapping technique is focused on using almost all of the characteristics of the human brain, ie, it is modeled our brain which left lobe works with words, right lobe works with images. (Brinkmann, 2007)

Therefore improve our mental faculties as to ensure the permanence of learning is by appealing to all the senses. With this idea, the study of the mind map is also conducted to inquire the availability in Visual Arts Education lessons. Pre-and post-test as a mind map are used to measure whether learning gains occurs in Visual Arts Education Lessons based on active learning Results are shared with teacher candidates, mind maps have been discussed on the requirements.

Problem

It has been seen as a problem that not paying enough interest for techniques and methods in practical which will be ensure motivation of students, not given enough space to arts culture in practice-based lessons, not measuring the gains in visual art lessons which is carried out with traditional learning methods.

Objective:

It is intended that mind maps can be used as a method and technique, and can also be used as a method measure gains in Visual Arts Education Lesson to teacher candidates.

Sampling and limitations:

This study is limited with the 3rd grade students of the Marmara University Atatürk Education Faculty, Fine Arts Department, Special Teaching Methods-1 Lesson whose school performance score is over 2.80 in 2013-2014 academic year. 10 students were selected as control group and 10 students were selected as experimental group from a group of 20 students whose success scores are similar from a class of 40.

Method:

Mind maps in compliance to the topic were applied to two group who have information about mind maps as a pre-test. The lesson is given to the control group with traditional learning methods, the experimental group with the active learning method. At the end of the course, both groups were applied on as a final test of mind maps. Pre-test and final test applied on two groups are evaluated by three faculty members and experts in the field.

At the end of the lesson students in the experimental group were conducted with the interview, Did you use before Mind Map technique? Do you want to use then? What are the most challenging aspects of the mind map technique? What are the most enjoyable sides of mind map technique? What are your thoughts about the contribution of mind map technique to you? (Şeyihoğlu, Kartal, 2013)

Mind map technique can be used in Visual Arts Education Lesson?

Questions were taken with the students' opinions. The interviews have been recorded without images, recordings were listened and made in writing. The resulting coded mind maps have been completed in the area by expert evaluators have evaluated the grades from 1 to 10.

Table 1. Evaluation of Pre-test

PRE-TEST	EXPERIMENTAL GROUP			CONTROL GROUP		
	EVALUATORS			EVALUATORS		
	1 st	2 nd	3 rd	1 st	2 nd	3 rd
1 st STUDENT	5	3	4	4	5	3
2 nd STUDENT	7	6	4	6	4	4
3 rd STUDENT	5	5	5	5	5	4
4 th STUDENT	3	2	4	3	4	2
5 th STUDENT	4	4	5	5	5	3
6 th STUDENT	2	3	5	3	4	5
7 th STUDENT	4	4	4	2	3	2
8 th STUDENT	6	6	5	6	5	7
9 th STUDENT	4	5	6	4	6	5
10 th STUDENT	4	5	3	3	4	3

Table 2. Evaluation of Post-test

POST-TEST	EXPERIMENTAL GROUP			CONTROL GROUP		
	EVALUATORS			EVALUATORS		
	1 st	2 nd	3 rd	1 st	2 nd	3 rd
1 st STUDENT	8	8	9	6	4	5
2 nd STUDENT	10	10	10	3	4	3
3 rd STUDENT	6	7	7	6	6	6
4 th STUDENT	8	9	8	7	6	5
5 th STUDENT	6	8	7	5	5	7
6 th STUDENT	9	9	9	6	5	6
7 th STUDENT	7	6	7	6	7	7
8 th STUDENT	8	8	8	8	7	8
9 th STUDENT	9	8	9	5	6	6

Qualitative research is one of the knowledge production process towards understanding the information of the lifestyle of the people, their stories, their behavior, organizational structures. (Strauss, Corbin, 1990).

Unlike quantitative research based on statistical data analysis, qualitative research, what kind of meanings people ascribe to events, in other words, look for answers to the question of how events are described. (Dey, 1993) Content analysis is one of the most commonly used method among the types of qualitative data analysis. Content analysis is a method which is mainly used in the written and visual data analysis. In this method, a deductive path is followed. (Özdemir, 2010)

Data Analysis

Table 3. Descriptive Statistics. Regarding the Average score of Assessors

	N	Min	Max	\bar{X}	SS
Pre-test - Experimental	10	3	5,67	4,4	0,91
Pre-test - Control	10	2,33	6	4,13	1,06
Post-test - Experimental	10	6,67	10	8	1,09
Post-test - Control	10	3,33	8	5,97	1,32

Participants in the experimental group gained as a result of the evaluation scores ranged from 3 to 5.67 (\bar{X} = 4.4, SD = 0.91).

Table 4. Determination of Differences of Test Scores between Control and Experimental Groups

	<i>t</i>	df	<i>p</i>
Pre-test Experimental-Control	1,238	9	0,247
Post-test Experimental-Control	2,957	9	0,016

According to the results of applied paired samples t-test to prior to the implementation of the evaluation scores performed to determine whether significant differences between experimental and control groups, it was observed that there is no significant differentiation between the two groups. [$t(9)=1.238$, $p=0.247$].

So, it can be said that groups are equivalent prior to application.

According to the results of the paired samples t test performed to determine whether significant differences between evaluation of post-implementation of the experimental and control group scores are significant differences between the two groups was observed. [$t(9)=2.957$, $p=0.016$].

Table 5. Determining Differences Between Pre and Post Test Scores

	<i>t</i>	df	<i>p</i>
Pre-Post Test Experimental	-8,672	9	0,001
Pre-Post Test Control	-3,271	9	0,010

According to the results of the paired samples t test performed to determine whether significant differences between evaluation of experimental group pre-and post-test scores were found to be significant differences between the two groups [$t(9)= -8.672$, $p=0.001$]. Accordingly, it can be said that the students in the experimental group progressed in the implementation process.

According to the results of the paired samples t test performed to determine whether significant differences

between evaluation of control group pre-and post-test scores were found to be significant differences between the two groups [$t(9) = -3.271$, $p=0.010$]. Accordingly, it can be said that the students in the control group progressed in the implementation process.

Because achieving the objectives of the lesson depends on the student's interest and love to lesson. (Delen, 1998)

According to Barth in order to achieve the objectives of the lesson, primarily it is necessary to use methods that make students active and increase interest and achievement of student. (Ozturk, Otluoğlu, 2003)

In researches that have been found that at primary education level usually traditional methods such as take notes, straight narration are applied and aren't used enough equipments. (Celebi, 2006)

The results from the students' opinions are as follows:

Table 6. Question 1

QUESTION	EVALUATION CODES	STUDENTS CODES	RATING
Did you use mind mapping technique before?	YES	9-6	20%
	NO	1-2-3-4-5-7-8-10	80%
	YES	1-3-4-5-6-8-9	70%
Do you want to use this technique hereafter?	NO	-	0%
	PARTIALLY	2-7-10	30%

As seen in Table 6, teacher candidates' views on whether they use mind mapping technique are grouped under yes, no, and sometimes codes. It was observed that 80% of teacher candidates do not use this technique before, 20% of then use. For "Do you want to use this technique hereafter?" question 70% of group stated that they want, 30% of the group stated that they can use partially. There is no answer that stated will not use. Teacher Candidate (T.C) .4: "I've used this technique before. Mind maps can be created according to each subject. Frequent use can be beneficial in terms of retention of knowledge." T.C.1: "I did not use before. After learning my lesson I would like to use. Is meant to teach the subject in general terms recover and I thought it was an effective technique." T.C.8: "I have not used before, I think it is very important use. Because the technique facilitates understanding, provides persistency and summarizes the issues, reminds the information forgotten by looking at the map simply." T.C.10: "It's not used often would be used appropriate by subject." T.C.7: "Using of mind maps in each lesson may take time, create frustration, so it should be used according to the subject." T.C.2: "Mind maps are required to be patient when applying. Often use of technique for today's kids who consume everything instantly and has quick perception may destroy excitement." This technique uses the first time, the following conclusions can be drawn from the opinions of teacher candidates who use this technique the first time; technique deem necessary and which can be used in visual arts education classes, the use of the technique in place and at the right time students will create useful and fun environment.

Table 7. Question 2

QUESTION	EVALUATION CODES	STUDENTS CODES	RATING
What are the most difficult aspects of mind-map technique?	Creativeness and originality	1-2-5-8-9-10	60%
	Link between keywords	1-3-4-5-8-10	60%
	finding suitable pictures	1-6-7	30%

As seen in Table 7, answers of teacher candidates to question "what are the most difficult aspects of mind-map technique?" are evaluated by coding creative, originality, keywords and the relationship between them, to draw accurate pictures. It can be seen that 60% of the teacher candidates are forced in terms of creativeness and originality, and 60% were forced on to establish the link between keywords. 30% have difficulty in finding suitable pictures. Teacher candidate T.C.5: "Choosing the appropriate keywords and offering in a creative way

was the most difficult side for me.” T.C.1: “Putting key words in the right place made me tired mostly. In addition, to draw pictures according to the word forces me and took the time.” T.C.7: “Ensuring to explain the subject by the visual materials and drawings was forced me.” It was seen that the teacher candidates are especially forced in creativity and suffered in placement of keywords in the appropriate places in creating mind maps. Due to being students of art education department, they didn’t have difficulty on drawing, but it might be considered there will be difficulties applying in secondary education.

Table 8. Question 3

QUESTION	EVALUATION CODES	STUDENTS CODES	RATING
What are the most fun aspects of the mind mapping technique?	Creative and witty	1-2-3-6-7-8-10	70%
	Being pictorial	1-3-4-5-7-9	60%
	Being colorful	1-3-4-6-8-9-10	70%

As seen in Table 8, answers of teacher candidates to question “what are the most fun aspects of the mind mapping technique?” are evaluated by coding creative and witty, be in the form of pictorial and colorful. The teacher candidates have found it entertaining by 70% due to being creative and humorous, by 60% due to being colorful, by 70% due to being pictorial. T.C.3: “The most entertainment of mind maps is offering basic concepts related to our topic in a creative way, with pictures, icons, colored with dyes”. T.C.1: “I think it is a stage of converting every key word to an icon or object, and coloring this object.” T.C.9: “The most fun part after understanding the issues by following the chain, making drawings suitable for coloring, to complete mind map. It was a study done willingly and amused.” These opinions shows that they find mind map technique amusing due to color dyes used in construction, creative and witty images and get them pleasure in coloring.

Table 9. Question 4

QUESTION	EVALUATION CODES	STUDENTS CODES	RATING
What are your thoughts related to contribute of mind map technique to you?	Learning amusingly	1-2-3-5-6-8-9-10	80%
	Supporting imagination and creativity	1-4-5-6-7	50%
	Noticing permanent of information	2-3-5-6-7-8-9-10	80%
	Mapping thoughts by symbols	1-2-4-7-8	50%
	Increasing confidence in lessons	3-9	20%

As seen in Table 9, answers of teacher candidates to question “what are your thoughts related to contribute of mind map technique to you?” are evaluated by coding ‘learning amusingly’, ‘supporting imagination and creativity’, ‘noticing permanent of information’, ‘mapping thoughts by symbols’, ‘increasing confidence in lessons’. We saw that 80% of teacher candidates stated that they learned amusingly when creating mind maps, 50% of them stated that it supports creativity and imagination, 80% of them say retention of knowledge is satisfied, 50% of them stated that they learned to do maps convert their thought by symbolizing and 20% of them stated self-confidence in the course increased. T.C.8: “I like to reviving and mapping of discussed topics in my thought in my mind. Information was consolidated and became permanent.” T.C.5: “It made me learn by simplifying Information, and more permanent, more fun approach to the subject by giving us and our creativity has developed different perspectives.” T.C.6: “I think it would provide permanence for that caters to all kinds of intelligence”. T.C.2 “It offered opportunity to suggest learning by entertaining, thinking and doing.” The opinions of the teacher candidates shows us the application of mind map is a viable technique for becoming the knowledge permanent and retention in the theoretical explanation of visual art education by thinking, amusing, applying.

Table 10. Question 5

QUESTION	EVALUATION CODES	STUDENTS CODES	RATING
Can mind map technique be used in Visual Arts Education Lesson?	YES	1-2-4-5-7-8-9	70%
	NO	-	0%
	SOMETIMES	3-6-10	30%
How can be improved?	BY GROUP STUDY	2-4-8-9	40%
	BY LISTENING MUSIC	1-2-3-4-6-7	60%
	IN COMPUTER MEDI	3-5-9-10	40%
	BY USING COLLAGE TECHNIQUE	1-4-5-7-9	50%

As seen in Table 10, answers of teacher candidates to question “Can mind map technique be used in Visual Arts Education Lesson?” are evaluated by coding yes, no and sometimes, and answers of teacher candidates to question “How can be improved?” are evaluated by coding ‘by group study’, ‘by listening music’, ‘in computer media’, ‘by using collage technique’. In evaluation “Mind Map technique can be used in Visual Arts Education Course?” question is answered as 70% yes, 30% sometimes, and no answer is not used. T.C.4: “This technique can be used in the Visual Arts Education lessons due to being tutorials, creative and keep in mind.” T.C.10: “Considering that the visual arts education lesson is one hour per week, using mind maps continuously will take time, so it can be used convenient way to the subject.” T.C.6: “Mind map technique can be used only theoretical explanations of art culture in visual arts education lessons. I think that implementation phase of the lesson will take long time, lesson duration may not be sufficient, so the process can be completed as homework.” All of the views of the teacher candidates are that mind maps can be used in Visual Arts Education Lesson. However, there are insufficient teaching hours, because it is considered that techniques of the implementation phase will take time, it seems suitable to be done at certain times appropriate to the content of the subject.” The question “How can be improved?” is answered by 40% as group study’, 60% ‘by listening music’, 40% ‘in computer media”, 40% ‘by using collage technique’. T.C.9: “I have so much fun doing the application, but taking too much time is bothered me. Due to we will implement in Visual Arts Education Lesson, it can be concluded by applying a more practical way as group work by using collage technique with suitable pictures. T.C.5: “Today's children are able to use technology very well. Creating mind maps on computer related the topics discussed in lesson can be given as homework. Thus, the time would have gotten the opportunity to work in an environment where the student's favorite creation will be tastefully done.” Considered in accordance with the opinion of the teacher candidates; consist of a minimum of hours, being crowded of classes will be the answer to the question of how to plan this technique as taking less time. Listening to music while working will increase the motivation of students and have relaxing effect so it is seen music may used in the lessons. Any problems in implementing group work, collage technique. However doing in the computer environment “Did students the homework by itself?” question brought of the teachers in that it is necessary to take the necessary precautions.

Conclusion

As can be seen from the results, teacher candidates previously not using mind maps stated that they can use in Visual Arts Education classes for ensuring the retention of knowledge. To achieve the objective of mind maps technique in the course applied to the experimental and control group, the active learning method should be used in Visual Arts Education lessons. Teacher candidates of art education department engaged in visual arts stated that this technique will contribute to the development of students' visual intelligence. As stated by Brinkmann using of both hemispheres of the brain facilitate learning. It is seen that the teacher candidates applying mind maps technique have difficulty in finding the proper keywords, picturing and placing. In this case when this technique is applied in Visual Arts Education lessons, the student can avoid to be forced to draw a picture, so it can be

suggested to use appropriate photos by cutting from magazines. It was concluded that due to Visual Arts Education course consisting of one hour per week and being crowded of classes, avoiding using this technique so often would be true, but it may deem in appropriate in cases. To alleviate this situation, it would be appropriate to use group work in the classroom in Visual Arts Education Lesson and it can be said can be given home homework.

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An argument performance task in a virtual classroom for enhancing graduate students' analytical reasoning

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Abstract

An analytical reasoning ability was taken into action in a virtual classroom with a performance task (PT). The performance task activity which focuses on argument was designed based on a logical fallacy, aroused by scenario accompanied with library of related evidences. A virtual classroom simulated a non-graphic learning interaction using Learning Activity Management System. Learners studied in fallacy class and then moved to an individual study mode with selected evidences in order to discuss about argument topics. Finally, learners moved into double-learning that allows discussion of two learners for assessment and conclusion. Using a virtual environment increase an extensive scope of document library that can be different kinds of digital archives

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Peer-review under responsibility of the Sakarya University.

Keywords: An argument Performance task; Virtual classroom; Analytical reasoning ability

Introduction

One of learning processes is to manage intelligence process that continuously enhances person's ability and promotes opportunities to practically apply thinking skill in real life as a foundation of human development. Thinking and intelligence process require critical reasoning which is vital for graduates who are expected to develop countries, therefore, education system should be indispensably improved to ensure learning efficiency. Unclear reasoning of learners can lead to imprecise perspective, thus interrupting connections of ideas and contents. Consequently, thinking concepts become vague or even wrong. Ability to apply analytical reasoning with confidence enhances sensible judgment, thus leading to logical and valid thinking (Boss, 2010 as cited in Banjong, 2013). Krulik and Rudnick (1993) stated that reasoning is one of the important factors of thinking which include many complicated procedures. Reasoning is the summary of basic thinking, critical thinking, and creative thinking.

Reasoning is the routine activity that people apply to support conclusion. However, rationales in discussion may not valid according that people are likely to use reasons repetitively without scrutiny, leading to confusion of communication. Analytical reasoning is required to evaluate validity of concept. Hence, the critical factor of teaching is to encourage learners to apply analytical reasoning that promotes open-minded and fair mentality, concrete assessment criteria, and commitment to find accuracy and clarification.

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McDunnigan (2013) defined analytical reasoning as the ability to understand either qualitative or quantitative information in various environments and acknowledge its pattern. The structure of such data depends on the area that a person is interested such as argument structure or trend of mega data. Learning of these insights relies on how effective individual can apply additional information beyond his mindset or in-class learning. Person who fails to apply analytical reasoning will not be able to use additional data to create thinking structure. Kennesaw State University (2013) defined analytical reasoning as the ability to apply knowledge, skills, and information management to analyze ideas, situations, or problems properly and efficiently, either qualitative or quantitative.

This research summarizes factors that promote ability to apply analytical reasoning which are

1. Ability to explain or elaborate clear agreement or objective
2. Analytical skill which includes ability to categorize data types and validity, ability to define direct or inversed relationship of data
3. Ability to evaluate which is about how logically people can select supporting data
4. Ability to summarize which is about logical conclusion.

Critical thinking requires reasons which include argument that support conclusion with judgment, thoroughness, and non-bias perspective. The arguments can vary across subject areas including, Psychology, Logic, Philosophy, Pragmatics and Education. Argumentation involves both thinking skills and communication skills (Kuhn, 2010). Argument deal with various opinions and the goal of an argumentation is to change opinion. A well-reasoned argument has been leaded to a better opportunity to accomplish that goal. The fallacy studies of reasoning have been an important theory that involves several fields including communication studies and critical thinking (Carey, 2000).

Fallacy is a very important strategy for learning because it support learner to reject unrealistic reasons and to understand how the reason is unrealistic. Furthermore, the fallacy will be a good experience for the learner to think and to judge the proper reasons. Fallacy applied in this learning is informal, which is divided into 3 groups which are

1. Ambiguity – argument that consists of 2 unclear statements or concepts which are related
2. Fallacies of Relevance – relationship of statement that supports or doesn't support the reason. The relationship can be positive, negative, or neutral
3. Wrong reason based unverified assumption which derived from accusation, or unproven assumption due to lack of supporting evidence so such argument is invalid.

Academicians strongly focus on education success regarding broad and varied analysis, reasoning, and thinking skill (ability to identify assumption based on reason). It is evident that practice of analytical thinking is the learning characteristic of learner in the 21st century, which shifts from learning to doing. Performance Task is about practicing to obtain Performance so as to further in-depth learning which is about how to creativity.

PT (performance task) is developed for to assess skill of specific learner. PT is also a part of CLA-test (Collegiate learning assessment-test). The procedures include problem solving, which require multiples skills, however the most important skill is analytical reasoning. PT is composed of scenario, library documents and questions. The fallacy will be added into PT to screen careless learners. Many academicians define PT in various concepts, for instance, Chun (2010) mentioned that PT is strategy for practical learning process which illustrates the complexities and challenges. Students must then show their skills and knowledge in various fields to complete the task. The further practices of student on problem solving exercise would be needed more than conventional passively selecting answer, to initiate how to apply the information in real-world contexts. Qing, Ni and Hong (2010) reported that the PT is closed to problem-based learning, but the different is only teaching process. PT includes various rules, which learners have to comply in difference situation. Mueller (2012) expressed that the PT is an assignment tools for student, in order to evaluate their performance and to apply it in real world. From previous reviews, the PT can be concluded that, the complexes scenario learning, based on real life situations, focus on participation of the learners. The learning will combined the various processes for practicing then leading to the sustainable success. From the study of types of PT of Marzono(1992) Willis(1998) Tiwat(2006) and

Willis and Willis (2007), researcher has a conclusion of types of PT, PT is divided into 5 types including comparative task, categorization task, decision-making task, problem-solving task, and creativity task.

Virtual classroom is defined in many aspects, for instance, Turoff (1995) mentioned that the virtual classroom is teaching and learning environment settled in a computer-mediated communication system. Yang and Liu (2007) defined virtual classroom as interactive class that facilitate collaboration and liveliness of learners in which teachers can control teaching process like common classroom. Michale (2012) said that structure of virtual classroom is similar to common classroom but the differences include technology and equipment to convey data in which online and distance learning play vital role as virtual learning tools in current education system. New learning tools can fulfill learners' needs; promote liveliness and attractiveness without limitation in terms of time and location of class (Conrad & Donaldson, 2004). Therefore, virtual classroom support information and idea sharing that learners can participate create pleasant learning environment, thus understanding diversity of each learner.

2. The Aim of the Research

The general aim of this study is creating virtual classroom that support argument performance task to enhance ability of graduates to apply analytical reasoning.

3. Method

This research and develop is divided into 4 steps of An Argument Performance Task in A Virtual Classroom for Enhancing Graduate Students' Analytical Reasoning as follows;

3.1 Analysis process of argument topic from questionnaire. Argument will be identified to set learning topic and analyze the contents.

3.2 Task preparing process by scenario and questions will be set in this process and verified by specialists.

3.3 Learning process requires pre-test before attending class. Virtual classroom divided in 3 rooms; the first room is for fallacy practice which include 3 situations – 1. Ambiguity 2. Fallacies of Relevance and 3. Reasoning based on unverified assumption. Reasoning can be divided into 4 steps as follows;

1. Identification of argument and reasoning
2. Reasoning support in terms of agreement or disagreement
3. Evidences in terms of contents, documents, verifications to support reasoning
4. Rationale or combination of related content, documents, verifications to create reasons.

Learners have follow 4 procedures of reasoning that promote ability to explain situation. The second classroom is single-thinking room in which 2 types of questions will be asked, which are comparative task and categorization task. PT can be is divided into 7 steps as follows;

1. Target identification consists of expectation of research and selection of performance task that corresponds to learning objective
2. Situation analysis consists of selection of case or situation to be simulated for study
3. Task planning consists of introduction of project to describe activities, outcomes expected, and methodologies
4. Data presentation consists of preparation of findings and facts that are relevant to situation for further analysis
5. Task implementation consists of single and double tasking
6. Task analysis allows learners to share specific and relevant examples for argument
7. Task assessment is the evaluation process based on criteria and scoring levels

Learners have to follow 7 procedures that promote ability to analyze. The last classroom is double-thinking

room in which 3 types of questions include decision-making task, problem-solving task, and creativity task. Learners have to follow 7 procedures. Simulation in last classroom enhances ability of learners in evaluation and conclusion.

A virtual classroom simulated a non-graphic learning interaction using Learning Activity Management System. Learning Activity Management System has many tools to support the learning such as Noticeboard, Forum, Chat, Share Resources etc.

3.4 Evaluation process is a step which the learners evaluate by post-test. Post-test will be conducted and findings will be summarized after class. The proposed model of the current study is illustrated in Fig. 1

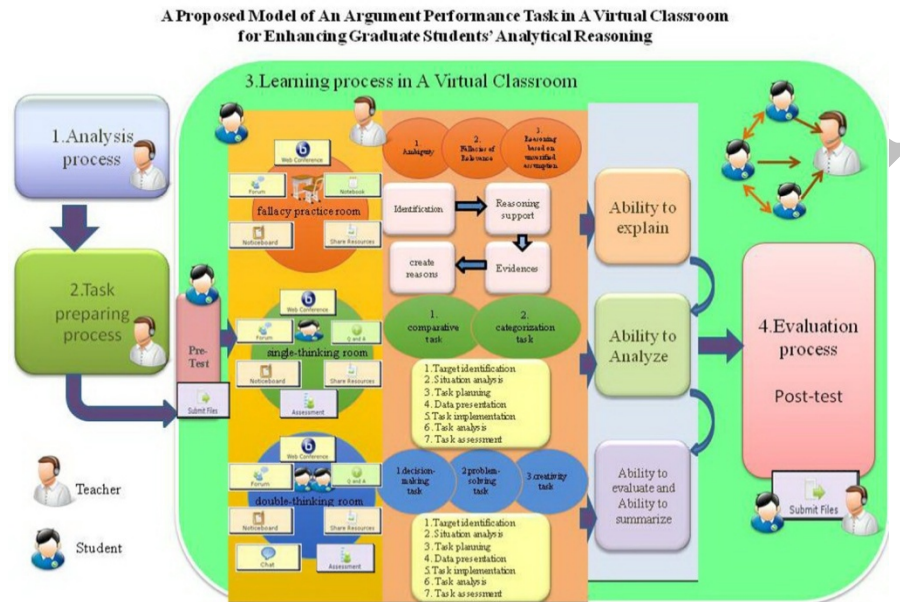


Fig. 1. Model of An Argument Performance Task in A Virtual Classroom for Enhancing Graduate Students' Analytical Reasoning.

4. Conclusion

The objective of this research is to create virtual classroom for argument performance task that enhance ability for analytical reasoning of graduates according that analytical reasoning is relevant for learners to propose logical idea and support decision making process. Performance task of reasoning is a method of active learning that allows learners to develop critical skills, especially capability to apply analytical reasoning. Learners will then be able to explain, analyze, evaluate, and summarize, thus facilitating logical thinking. Teachers can apply performance task about argument reasoning in virtual classroom in teaching process to enhance capability of learners in analytical reasoning.

Acknowledgements

The research team wishes to thank Chulalongkorn University for providing the fund for this paper. I really appreciate and have special thanks than all my family that helped me to concern my research.

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An Educational activity: The “noise” problem in cosmic ray experiments

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Abstract

There are many experiments on cosmic rays located in different countries; sometimes they use muon telescopes assembled by students and teachers of secondary schools, with a clear added value from the educational point of view. In Italy, one of them, is located at High School "E. Fermi" in Catanzaro, which is involved in the Extreme Energy Events (EEE) project, a national project carried out by a collaboration of several research institutes. This paper reports about one of the educational activities carried out with the students of high school "E. Fermi", related to the concept of “noise” affecting scientific experiments.

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Peer-review under responsibility of the Sakarya University.

Keywords: experiment; school; educational activity.

Introduction

The experiment on the cosmic rays offers a unique opportunity to the students, during their educational iter, because they have the possibility to come into contact with the world of the scientific search, to learn further scientific concepts that often result of difficult understanding, concepts that thanks to the educational activity in the laboratory, become simpler and enjoyable from all students, also students considered less careful or lazy. The experiment on the cosmic rays has given a lot of opportunities of growth to the students of High school “E. Fermi”, both from the scientific point of view and from the purely formative one. A lot of didactic activities were born as soon as that it proceeded with the assembling and commissioning of the telescope used for the revelation of muons in the school laboratory, as for instance, the activity related to the presence of "noise" that always is present in scientific experiment.

Shortly, this educational experience has articulated in 4 steps:

1. Recording of the events through opportune system of acquisition
2. The noise's evaluation that is found
3. Possible solutions to reduce the noise.
4. Description of all the procedures followed during the job.

Before to go on, however, in the description of the 4 steps, it results necessary, for love of clarity and completeness, to give a brief description of the telescope used for studying the cosmic rays.

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check the cable connections and perform, after explanatory measurements of chamber efficiency.

Later on, during the data taking stage, the students perform the daily checks which are mandatory to keep the system working, how to treat and analyze them, using the very same approach, since younger students work in close contact with more experienced ones in the most natural way.

Almost all the schools, moreover, set up their own EE INFN, where they store all the relevant information about the

Fig. 1.
Description of MRPC chamber constituting the telescope for cosmic rays

1.1. MRPC description

The telescope is composed by three Multigap Resistive Plate Chambers (MRPCs), characterized by an active area of about 2 m^2 . The MRPCs used, shown in Fig.1, have six gaps obtained by a stack of glass plate spaced $300 \mu\text{m}$ each by means of commercial fishing line, and characterized by a volume resistivity of about $10^{13} \Omega\text{cm}$. The outer glass plates are coated with graphite painting, in order to be able to apply the high voltage and obtain the desired electric field in the gas gaps; when an ionizing particle passes through the gas, it creates a certain number of primary ion-electrons pairs, which are amplified in the usual avalanche process and finally induce a signal on the external readout strips. The gas filling the gaps is a mixture of $\text{C}_2\text{H}_2\text{F}_4/\text{SF}_6$ 98/2, while each MRPC is equipped with 24 copper strips 160 cm long, having a pitch of 3.2 cm. The particle impact point is reconstructed by the hit strip in one direction, and by the signal arrival time difference at the strip ends in the other direction. At the operating voltage of 18 kV, the measured MRPC efficiency is typically 95% and the time resolution is of the order of 100 ps, so that strip dimension, and time differences provide a spatial resolution of about 1 cm in both coordinates. The signals coming from the front-end cards are collected and processed when a triple coincidence of the MRPCs generates the trigger for the data acquisition. The absolute time of each event, necessary to spot coincidences between events recorded at different sites, is obtained by means of a Hytec GPS VME module. With an instrument so complex, the assembling and commissioning, offer clearly suggestions for different educational activities. What follows is a description of the educational activity coming from the problem "noise" encountered during the experimental activity, which can be described in four steps.

Step1: Events recorded by acquisition system

As already said, the signal is picked up by the strip of copper suitably connected to an acquisition system. The acquisition of the events and the subsequent processing is carried out by means of an appropriate software. An event, at least, is given by one hit (signal) to MRPC, but if the hits are not aligned, then it is "noise." We must, therefore, distinguish between hits and event, in fact, many can be hit by Noise (Fig. 2).

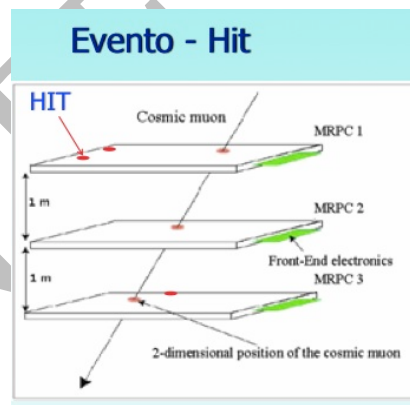


Fig. 2
Difference between event and hit

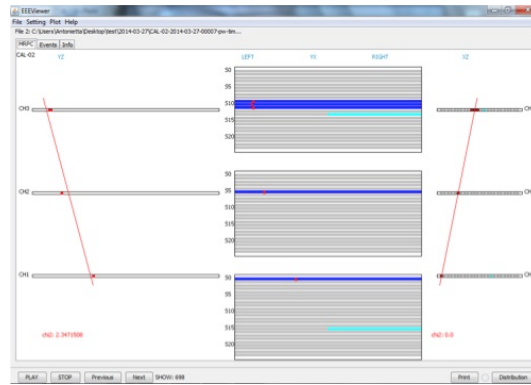


Fig. 3

Red dots indicate the hit. At the center, the blue lines indicate the strips which have produced an electrical signal (hit). On the right, the red squares indicate the strip on. The cyan lines indicate that an electrical signal is on that strip, but it is only detected by one of the side of the MRPC.

When, instead, the electrical signal comes only from a part of MRPCs and not from both sides, the software indicates the half-strips with cyan color (fig.2 and fig.3)

So, looking at this, the students have wondered how this was possible and why.

From the discussion that followed, it was concluded that the fact could be explained by saying that it could be a “noise”, or it could have been a fake electrical contact on the receiving channel of the data acquisition card. The strip in blue instead indicates that the electrical signal has arrived, both right and left of the chamber, but there is no trace rebuilt.

Then the second question was:

Why is not indicated the event?

The possible conclusion was the following: it's possible that from data processing, a hit is off the strip (ie, between one strip and another, or at the end of the chamber), so if the program is well configured, it will not indicate an event, but only a noise.

3. Step 2: Evaluation and analysis of “noise” problem

Students are documented on what is “noise” and thus have learned that it defines a general noise, a disturbance signal originated from different causes. They have learned that “noise” can be external (natural like solar noise, cosmic noise, etc., or caused by interference with external source), i.e. originated from sources external to the electrical circuits considered, or internal noise, i.e. originated from physics phenomena occurring inside the apparatus. Students have discovered that in the majority of cases the noise is generated by a set of factors that act in a purely random way and it can only be partially eliminated.

If we have an external “noise” it is necessary to identify the causes and isolate the system from them. If “noise” is internal, it is necessary to act on the physical characteristic of circuit elements.

Consequently, students have concluded that “noise” is an undesirable form of energy recorded with the signal that we want to detect.

Then, the students have proceeded with an initial noise analysis, which was performed using the software Histogram Builder that analyzes the captured files, showing them as histograms.

It allows to analyze the signals from the six FEA cards, that are mounted on the MRPC chambers, and from each of the two TDC modules, i.e. modules that convert a time value in number, in the associated electronics. At each channel of the FEA cards corresponds to a strip.

Here is the correspondence Channel → Strip

TDC1: 128 channels

0 – 23 CH1 Right → MRPC 1 right side
 32 – 55 CH1 Left → MRPC 1 left side
 64 – 87 CH3 Right → MRPC 3 right side
 96 – 119 CH3 Left → MRPC 3 left side

TDC2: 64 channels

0 – 23 CH2 Right → MRPC 2 right side
 32 – 55 CH2 Left → MRPC 2 left side

Once clear the correspondence, looking at Histogram Builder screen, it can understand that the MRPC2 is very noisy (Fig.4), in fact, on a file of 1000 events, the strip number 9 (x-axis) is on for 600 times (y-axis), i.e. for each event on MRPC2 are on many strips together, instead of one strip as in the ideal case. The MRPC3 shows a few noisy strip and the MRPC1 responds poorly (Fig.4).

The same software provides the multiplicity (Fig.5), i.e. the number of strips that give a signal in every chamber for event. One particle that passes through the telescope, should induce a signal on a single strip, at most on two, if the particle were to pass through the area between two strip.

In the ideal case, without noise, the graph should show, for every MRPC chamber (right and left FEA cards), one hit for event (a peak on value 1 or also 2).

The multiplicity distribution with peaks on the higher values, is indicative of strong noise component, while distribution on zero value indicates that some channels are “died”, i.e. with internal problem of detection.

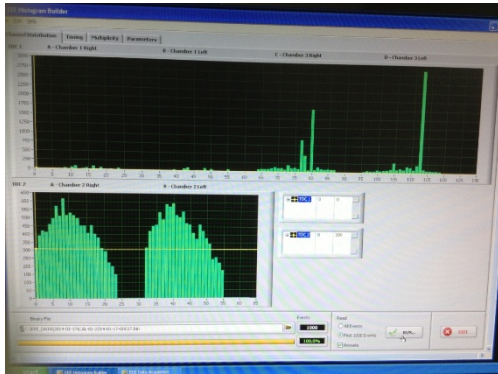


Fig.4

Histograms from Histogram Builder.

The upper part of the screen shows the channels for MRPC1 and MRPC3, right and left, in the bottom at left, the same for the MRPC2

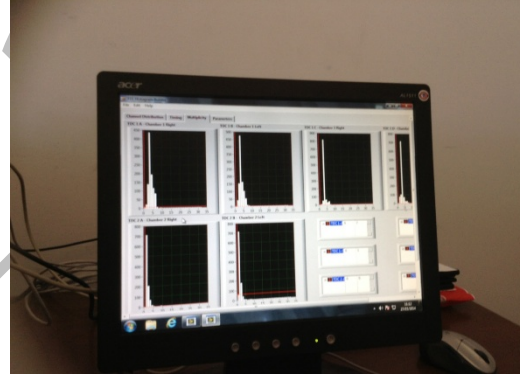


Fig. 5

The software shows the multiplicity for MRPC chambers

4. Step 3: Brainstorming – possible solutions

The students have followed these points:

- Identify what conditions are necessary in order to remove possible causes
- Identify anything that might limit a solution, such as cost, availability of materials, safety, etc....
- Read up on actions and measures that others have adopted
- Hold discussions for new ideas and proposals for solutions.

- Choose the resulting possible procedure

From these points is followed that the effect of electromagnetic noise on the circuit could be reduced by means a screening system.

With the certainty of not being able to remove the causes permanently, it was concluded that, in order to minimize the effects, one could take some of the countermeasures listed below:

1. Reduce the length of transmission cables
2. Use shielded cables
3. Do the grounding of all parts of the telescope
4. Do not use the same power supply for MRPC chambers and FEA cards
5. Arrange the cables so that they not intertwine each other
6. Place, as much as possible, the power supply away from the MRPC chambers and from transmission cables
7. Build appropriate box for the shielding the FEA cards

5. Step 4: procedure followed

The actions taken from the students are the following:

- The MRPC chamber are connected each other with copper wires
- Between terminals Amphenol, in correspondence of FEA cards and the metal box of the same chamber, was set scotch copper (Fig.6).
- Amphenol terminals, that are located in correspondence of the TDC modules, were placed in common between them and with the same crate, always with the scotch copper, and grounding. And again with the metal support of the chamber, which are grounded via a copper braid (Fig.7 – Fig.8).

In this way the acquisition of "good" event (good track) is improved, although there are limits. In fact, the countermeasures indicated in the previous points 4-6-7 can not always be taken, for example, due to lack of materials, costs to be incurred,

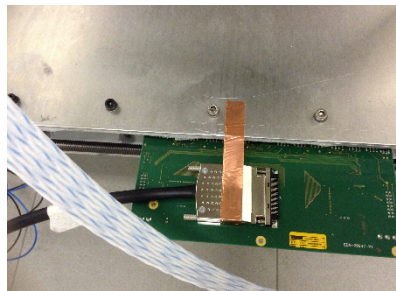


Fig. 6

Copper scotch connects the metal box of MRPC to Amphenol terminal for FEA card

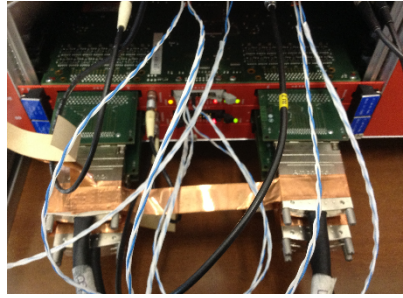


Fig.7

Copper scotch connects Amphenol terminal, for the TDC modules, each other, also with the same crate, and with the ground, that is shared with that of the chambers

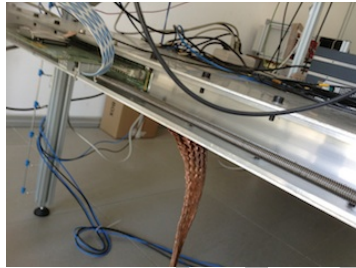


Fig.8

The copper braid that connects the MRPC with the ground

Conclusion

The work described was used as a educational tool, and in the awareness of the complexity of educational processes, it focuses on certain issues that are often poorly treated in traditional programs. The discussions on the problems encountered by the students, showed a clear and true assimilation of the concept of “noise”, demonstrating that the experimental activity is fundamental for the understanding of topics that would otherwise remain only abstract concepts. This activity has therefore allowed us not only to investigate the physics of cosmic rays and particle detectors, but has stimulated the curiosity and creativity of other issues, resulting in scientific and technological learning improvement.

Acknowledgements

Tanks go to the students, teachers and the headteacher of High School “E. Fermi”, Catanzaro Lido (Italy) for their participation and work with enthusiasm.

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INTE 2014

An educational tool the importance of informal studies/studios in architectural design education: A workshop summary

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Abstract

The controversial situation of the content of design studio, within the current conditions and the context of architectural education and the need for an idea to reorganize this studio by means of a structural rearrangement is the initial point of this study. The spreading idea in our country and across the world, is the possibility of giving an informal architectural education and its significant contribution to the formal education. Design education is the most important part of architectural education. Formal architectural education (training), followed by an architect in the candidate's training period, is a whole consisting of theoretical and practical courses. In spite of this programme package, in design education, student acquires to experience the design by his/her own and this is the only way to learn how to design. In this context, aside from formal architectural education informal studies such as workshops, seminars, conferences, exhibitions, competitions, excavation, etc. have an undeniable importance. In design education, "Informal Studies" have some outstanding results on developing design thinking skills, learning by doing, creating motivation, intuitive knowledge and self-confidence and at the same time these studies are a suitable tool for the LLP- lifelong learning programme. In this paper, as an informal study example Doğanbey town workshop will be discussed to evaluate the contributions of such informal studies on student's individual and collective learning styles, design thinking techniques and practices.

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Peer-review under responsibility of the Sakarya University.

Keywords: Architecture education, informal studies/studios, traditional architecture, dwelling, Doğanbey

Introduction

The roots of architectural design studios go back to the workshop and craftsmanship system of the Middle Ages. The design studios which were places for practice in such institutions that provide occupational formation are places of design simulations, radical changes, discussion over design methods and teachings today. The idea that is becoming widespread both in national and universal scale is investigating the occupation of architecture, architectural education, and in this respect the architectural design education, objectives, methods, environment, and the present state of management and structure in the architectural design education in accordance with the conditions of the present day.

Recently, in almost all areas of life, new changes and developments are experienced. Social events, technological innovations inspire new ideas and the human life and perspectives indicate more changes, and get more complex. All these developments affect the architecture as other social and science disciplines. While the architecture is defined by the academics, historians, theorists, and the critics again, architectural education, architectural practice, and the architects themselves are opened to debates and critics. High educational organizations are the places for a person to prepare himself for the professional life. Organizational units, which are highly evolved with the current requirements, and necessities of the era, also provide the architectural education and the students are prepared for their professional lives in these units.

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Four-year formal educational education is an education aimed at introducing competences for realizing a product in a concrete form through design development and the creativity of the student. In this sense, while a foundation is laid for architecture by theoretical courses in architectural education, creativity comes to the forefront with applied courses. Formal education is employed as an education system that is based on a particular curriculum, it is mandatory and demands certain requirements and prerequisites. Informal education is regarded as short-term practices, undertaken on a voluntary basis where practitioner determines and directs the process and the process is completed without there being any pass-fail issue (Ciravoğlu, 2003).

Formal architectural education supported by informal education have been stated to be a contemporary application. Informal media within the content of architectural design experience can be achieved by workshops. Independent, undoubted, dense working media reached at the workshops are good samples for the studios. The making up of the defective parts of the formal education by workshops and the student's being on his own and making his decisions independently shall conclude in the student's arrogating his work to himself and approaching it with more responsibility. Supporting and developing the workshop structure, which can hardly be located in the formal education, finds a place much easily in the informal education, and forming of the workshop - studio coherence shall contribute for both students and tutors. The necessity for the studio that combines formal and informal should be supported by the authorities and should be applied. The advantages of workshops should be made heard by the tutors and students and those must be encouraged to organize and participate in such activities. Those activities shall bring the student from a passive state to a more active one, providing short period and dense projects where he can use his imagination and shall increase his knowledge and practice.

Vernacular architecture has an undeniable place in and importance for architectural education. Thus, it was here deemed appropriate to focus on vernacular architecture and to inform eighteen students within this practice-based project which was carried out within the scope of a winter school.

Meaning in Traditional and Vernacular Architecture

Architecture is survival of the mankind (Filarate, 1965). Need of shelter is one of the main issues in architecture even from Adam and Eve period. Therefore, need of shelter because of harshness and peculiarity of earth conditions, which are unbearable, is vital (Ozkan, 2006). Traditional architecture is a complex field of study with several components. Many scholars have studied the topic and classified the concepts and terms referred to in the discussions and studies concerning traditional architecture. The term 'traditional' is often referred to and discussed in the context of studies concerning the meaning and scope of 'vernacular architecture' (Bourdier, 1989; Oliver, 1989 and Rapoport, 1989). In this respect some studies also focused on discussing what 'vernacular' is (Brunskill, 1970; Oliver, 1990 and 2003; Oliver, 1990; Stea, 1990 and Turan, 1990).

Rapoport (1969) classifies the built forms as 'primitive', 'pre-industrial', 'vernacular' and 'high style and modern'. 'Primitive building' is a term used by the anthropologists for the primitive-defined societies. It is built and used by all, with few individual differences. 'Pre-industrial building' on the other hand is built by tradesmen, with more individual changes; whereas 'high style and modern buildings' are those with an original design developed by specialists. Rapoport defines the 'vernacular architecture' as the anonymous buildings with no known builders or architects. Rapoport (1969) however argues that it is possible to have architecture without registered architects; Rudofsky (1964) in contrast supports the idea of architecture without architects.

Hence different terminology and frameworks are used to describe and discuss the traditional architecture in different discourses. Bourdier et al. (1989, 6) indicate that the idea common in all is that there is a process becoming a norm when enough people in a given society adopt it. 'Folk tradition' and 'traditional houses' in this sense imply a similar meaning; 'folk tradition' is related with the culture of the majority; while 'traditional houses' are evaluated in a discipline having an accepted model of buildings, beginning of institutionalization (Rapoport, 1969).

Lawrence (1987b, 16) adds to this discussion the synonyms like 'anonymous', 'indigenous', 'popular' and 'spontaneous'. Rudofsky (1964) likewise introduces the terms "non-pedigreed architecture" and "rural".

Stea defines the term 'traditional' in the manner of the actual age of a traditional. "It is a measure of its 'tradition-ness' than its degree of common acceptance as a cultural norm" (1990, 22). He points out the existence and use of 'codes' and 'standards' in characterizing the 'traditional'.

Bourdier et al. (1989, 5) describe the ‘traditional dwellings’ as the built expression of a heritage transmitting from one generation to another. On the contrary, Oliver (1989, 74) argues that the use of the term ‘traditional building’ is not valid and there is no field of ‘traditional architecture’; there are only buildings that embody traditions. In his later studies he prefers to use the term ‘know-how’ in order to identify ‘vernacular’ (1990, 147). “Vernacular building is a sort of building which is deliberately permanent rather than temporary, which is traditional rather than academic in its inspiration which provides for the simple industrial enterprises, which is strongly related to place, especially through the use of local building materials, but which represents design and building with thought and feeling rather than in a base or strictly utilitarian manner.” (Brunskill, 1981, 24).

In other words Brunskill in 1992 point out that: “Vernacular architecture is related to the traditions rather than academic inspirations” (Brunskill, 1992). This defines the fact that the main actors of the built environments are inhabitants and they construct in unity with the whole context and only with inspiration of the surrounding (Rapaport, 1999). Concerning peoples need, is always the main issue in every kind of architecture in terms of benefit of living. Therefore, vernacular architecture becomes essential in architecture world. Glassie in 2000 state that: “Buildings, like poems and rituals realized the culture. Their designers rationalized their action differently”(Glassie, 2000). This can show the identity of vernacular architecture in a more strong way. In vernacular architecture despite of other built environment, no architect is involved and no style is adapted to buildings within the context. All the buildings are being designed by local inhabitants according to their needs, which involve the culture they have, and their religion and beliefs and also their economical needs (providing job opportunities). This can show the identity of vernacular architecture in a more strong way. In vernacular architecture despite of other built environment, no architect is involved and no style is adapted to buildings within the context. All the buildings are being designed by local inhabitants according to their needs, which involve the culture they have, and their religion and beliefs and also their economical needs (providing job opportunities).

These mentioned above, affects space organization directly, for instance their occupation could affect the contextual formation in terms of their needs. For example if they are agrarian they need particular place for that, which is part of their life. Each context has different potential, which have different parameters such as, climatic and geographic difficulties that they need different solutions. Each solution has a different concept beneficial, to catch their goal. In other words, they design according to their needs to catch their benefit of living environment as well as surrounding. To achieve successful design they have to develop their design with respect to the physical, social and economical aspects, which includes: culture, religion, economy, lifestyle, gender roles, meaning, social structure, tradition and etc. (Oliver,1997).

Turan (1990) evaluates the vernacular architecture both as a product, a process and knowledge. Similarly, Rapoport (1990, 82) explains the “process” and “product characteristics” of vernacular environments. Accordingly the “process characteristics” refer to the ways in which the environment is created, including identity, intention and purposes of the designers, while “product characteristics” of vernacular environments refer to the definition of the environment; its nature, qualities and attributes, including the aesthetic aspects of the built environment.

Aim and Context

This study introduces the vernacular dwellings in Doğanbey within the context of vernacular residential architecture in Anatolia; and investigates their architectural and social characteristics. Doğanbey is selected as a case-study for its preserved vernacular architecture, which dates back to the end of the 18th century and the 19th century.

A workshop was organized in February 2011 for the students of the Architecture Department of Selcuk University in order to ascertain and analyze the historical and cultural data of the small town “Doğanbey” of Beysehir District in Konya City with a team consisting of 15 people under the supervision of Mustafa İncesakal, Zafer Kuyrukçu and Emine Yıldız Kuyrukçu. During the workshop, the students learnt the historical texture of Doğanbey, analyzed the historical structures and determined the traditional houses needed to conserve by making relief drawings and photographs.

Methodology

Different methods were used in the workshop organized in Doğanbey town. Firstly, a trip, study field of which was shown was organized and observations and meetings were performed about the structures. In the first days of the study, information about surveying was given to the student. Firstly, field study started with the participation of all students and continued with different structures with groups consisting of four-five people after education reached a certain level. Three individual houses are chosen in order to evaluate the spatial and social characteristics of the vernacular dwellings by means of detailed identification cards. Upon determining the structures on which students will study, they were photographed, information was received from the structure-owner and surveying measurements of the structures were performed. This process lasted 2 week.

General Description of Doğanbey town

The vernacular housing fabric of the Doğanbey Village, where a type of traditional Turkish houses is in evidence, was examined in the present study which was conducted within the scope of a winter school (Figure 1. a). Doğanbey Village is in the Beyşehir District of the Konya Province. A continental climate pervades the village where the people are generally engaged in agriculture and stockbreeding. Displaying a unique form of architecture in terms of its overall planning scheme, the Doğanbey Village used cut stone as the primary construction material. Elegant wood motifs are encountered in the interior spaces (Figure 1. b).



Fig. 1. (a) A group foto from Doğanbey winter school; (b) General view from Doğanbey Village

Doğanbey, a small town in the province of Beyşehir, is an important vernacular settlement that has preserved its original texture up to the present. Doğanbey, with its street shaped in compliance with the topography, religious structures, konaks and houses reflects the characteristics of vernacular locational elements. Doğanbey, houses which reflect the general features of Central Anatolia architecture have been shaped under the impact of family life, economic structure, cultural interaction, climate, topography, geological structure and construction materials. Most of the houses have been inhabited by the descendents of their original owners. There, traditional life and cultural structure still keep on going. Yet, vernacular texture has been losing its original values day by day due to warped urbanization and restoration, population increase, neglect and disinterest. Although there are a lot of vernacular houses in the area, only a few has been registered. In this study, firstly, three vernacular houses of Doğanbey, been recorded. Then, they are thoroughly examined so as to reveal Doğanbey's vernacular texture, settlement characteristics and architectural traits of the houses such as plan characteristics and types, facade design and its elements and their structural systems.



Fig. 2. (a) Students exploring study of field; (b) Students taking the measurements of the house

Surveyed Traditional Dwellings in Doğanbey

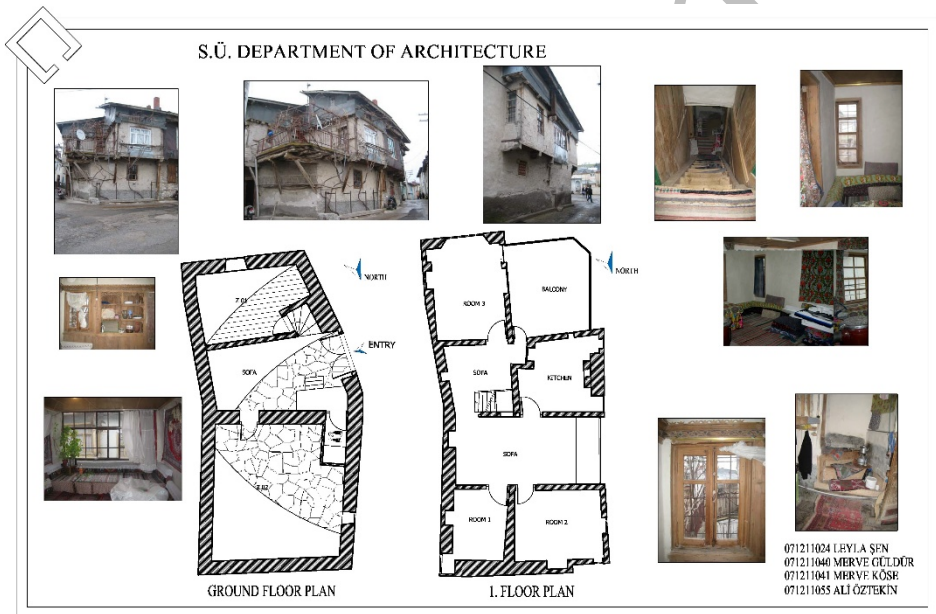
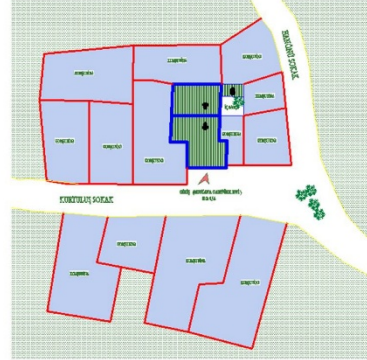


Fig. 3. Students practices 1

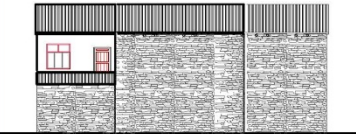
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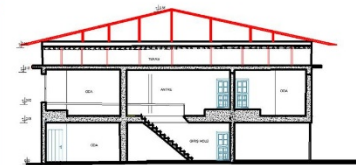
GENERAL VIEWS FROM THE HOUSE



LAYOUT PLAN

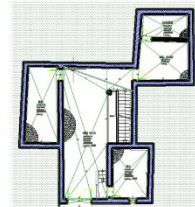


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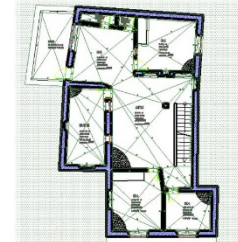


I-I SECTION

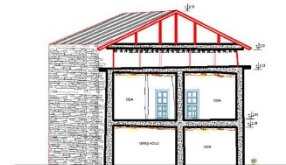
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EZGI EKİZCE 06/54
PINAR KARAKÖYÜN 06/56
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GROUND FLOOR PLAN



1.FLOOR PLAN



II-II SECTION

Fig. 4. Students practices 2



Fig. 5. Students practices 3

Conclusion

As it is mentioned, the particular patterns and principles in vernacular context bear sustainability opportunities. They have been designed with particular respect to the natural environment more than anything else. And also behind every piece that they have created, they have ideas and concepts, which reflect their local cultures, traditions and life style. It is mentioned that each context has numerous potentials, which have different parameters such as, climatic and geographic constraints that they need different particular solutions. Each solution has a different concept beneficial, to catch their goals, in other words, they design according to their needs to get the benefit of their living environment as well as close surroundings.

In conclusion, the distinctive Doğanbey architecture and its spatial identity, which are developed according to the contextual needs and traditions, by considering natural issues are thoroughly identified and particular concerns for future development are also discussed in this study.

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An e-learning course in EAP – Enhancing academic study skills, language and culture

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Abstract

The paper investigates the impact of the English for Academic Purposes (EAP) course on the development of academic study skills, language and culture. The course, designed within the framework of the Virtual University project, is aimed at English Major students who need to develop their writing skills and strategies for writing their theses in English and their presentation skills for an oral defense of their theses. The course was developed on the findings of a needs analysis and piloted in the EAP course in the bachelor-degree program in the 2013-2014 winter semester. The paper examines the research conducted in 2012 and 2013 that has confirmed expected progress in academic skills and language development and revealed a necessity to focus on cultural awareness more systematically. The paper discusses the results achieved from assessing students' essays and oral presentations.

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Peer-review under responsibility of the Sakarya University.

Keywords: English for Academic Purposes (EAP); essays; oral presentations; academic study skills, academic language, academic culture

An EAP Online Course

In 2008, Trnava University applied for a project, called Virtual University, with the aim to support e-learning education and enable students to study wherever they are. In 2009, the project started to be implemented in three faculties of Trnava University in which enthusiastic pedagogues were willing to produce new materials to make their courses more available for their students. The Department of English Language and Literature within the Faculty of Education of Trnava University recognized various obstacles their students had to overcome while writing their theses in English in the past few years and decided to conduct research based on a students' needs analysis - the process proposed by Jordan (2004). The theoretical approach to the needs analysis was firmly based on Munby's sociolinguistic model for defining the content of a purpose-specific language program, which aims at giving a valid specification of the target level communicative competence of users as it operates at two stages: building up a profile of student needs and converting them into syllabus content, presented in Munby's *Communicative Syllabus Design* (1997). A third perspective referring to the distinction between learner-centered and learning-centered approaches (Hutchinson, Waters, 1991) was included to the theoretical basis of the research.

1.1. Needs Analysis

The group of learners the research in 2010-2012 targeted were students studying English Language and Literature in combination with other disciplines such as languages, sciences, humanities and arts, and all the questions were designed to reveal the skills relevant for students (needs), the skills students consider important and want to improve (wants) and the desired competence of students (lacks).

Focusing on academic study skills, it was found out that previous secondary-school studies had limited students' study skills by prioritizing grammar over developing proper communicative language skills, affecting mostly reading, which had been practiced through reading aloud word by word without noticing meaningful units or guessing meaning of unknown words from the surrounding text. Prediction related to thinking ahead, hypothesizing and predicting had not been practiced. The focal students admitted not being able to use proper language as speaking activities during their studies had been focused on memorizing the texts from the course books and writing had not been practiced systematically. The proficiency test revealed that the traditional approach to grammar teaching had been limited to correct forms at the expense of usage and the aspect of formality had not been mentioned much during their secondary studies, so students had not been aware of its proper usage. Culture had been taught through reading the texts about English-speaking countries, and any steps toward intercultural teaching had not been recognized.

The needs analysis confirmed the necessity to enable students to develop their study skills, academic language and culture, as more than 50% of English Major students had applied for thesis writing in English. The needs section of research 2010-2012 displayed the necessity to introduce the formality aspect of English due to the test results, in which a large number of students (68%) failed in tasks related to formal English. The same number of students (70%) claimed that they had never practiced referencing, and had not been aware of paraphrasing. When expressing their wants in the questionnaires, 57 percent requested for an intensive course related to thesis writing and 49 percent acknowledged their unawareness of presentation techniques (Béřešová, 2013).

The needs analysis proved the necessity of designing a course which would enable students to overcome their deficiencies and help them to complete their bachelor-degree program successfully.

1.2 An online course

English for Academic Purposes – an online course (Béřešová, 2014) consists of 7 sections divided into 14 units providing practical help in developing academic study skills, such as effective note-taking, citation, referencing, paraphrasing, summarizing, presenting the achieved data orally, and developing academic language and culture. Students are encouraged to study independently as a number of practical tips are presented and authentic materials are provided for practicing all four communicative skills, grammatical structures and vocabulary characteristic for academic discourse and attitudes, beliefs and values of the English-speaking academic world. From this paper's perspective, the online course sections related to speaking, writing, language in use and academic culture are discussed below as the data displayed in the data analysis refer to oral production and interaction, and written production.

- Speaking

The material provided in this section enables students to practice both oral production and oral interaction. The activities of this section support developing the ability to present the chosen topic fluently without reading from notes, and responding to comments and questions related to the presented paper. The students are trained to justify their presented viewpoints. Evaluating presentations is included as it can help student to become self-aware.

- Writing

This section presents practical steps necessary for students to be aware of communicating a clear message effectively in written English by introducing key concepts in academic writing, exploring the use of the layout of the paper, developing and presenting an argument, practicing academic genres such as essays, abstracts,

summaries, etc. The mother-tongue influence on writing is diminished by training students to develop a good paragraph in English.

- Language in Use

These activities focus on distinguishing multiple meanings of words, using dictionaries and extending general and academic vocabulary. The activities based on more general words used for discussing ideas and research are usually complemented by more specific words regarding the discipline students are concerned with. Formal grammar usage such as nominalization, the passive, subordinate clauses and linking devices is explained, practiced and systematically revised. This section is aimed at language needed to understand and deliver academic arguments, language of speculation and synthesizing information from multiple sources into their academic texts and presentations.

- Academic Culture

The issues of how to avoid plagiarism, using the main forms of citation and referencing are presented and practiced. Students are exposed to presentations which are analyzed and contrasted. The rehearsal of the thesis defense is recommended and promoted. From the practical perspective, students are enabled to practice their presentations in pairs, focusing on timing, justifying the presented viewpoints and evaluating others' opinions. Influenced by the culture of English-speaking countries, the Department encourages students to present their ideas in their theses on the basis of freedom to communicate and disagree with the authors' opinions without fear of repression.

Apart from the above-mentioned sections, the course involves sections referring to reading and listening skills, practiced through lectures and authentic academic texts, which provide realistic contexts for exploring these skills.

The course enables students to acquire academic skills which are required to function effectively in a university environment.

2. The Assessment of Essays and Presentations – The Research Conducted in 2012 and 2013

While working on an online EAP course, an ongoing debate about its probable impact on students' study skills, language and culture resulted in the idea of carrying out research which would enable us to compare the performances of students that did not take part in the course and those who applied for the course. In 2012, we measured the students' performances in essay writing and presenting the chosen topics with the aim of obtaining data related to their academic skills and strategies as well as academic language acquisition and cultural awareness. These students deliberately decided to apply for writing their theses in English and were led by their supervisors while working on their research and thesis writing. This group of students became a control group in our research, in which an experimental group were the students who applied for an optional course – an online EAP course. Our aim was to thoroughly examine the effects of the EAP course and to identify the factors influencing the quality of the students' theses and oral defense presentations. The hypothesis of the research was associated with the impact of the online course on students' writing and speaking skills, academic language and culture. The data presented in this paper are based on assessing students' essays and their presentations. Each group (experimental and control) consisted of 12 English Major students in combination with other disciplines in their third year of the bachelor-degree program, and, as mentioned above, exclusively those who applied for writing their theses in English. Both written and oral performances were assessed using the analytical rating scales.

2.1 Assessing essays

In the first place, it needs to be mentioned that the rules for academic writing in Slovak are not the same as those for writing in English, mainly those referring to genres and levels of formality, and the organization of the text. Writing essays, topic and illustrative sentences in a paragraph are typical for English academic culture. Some

features of essay writing are practiced in courses of general English during secondary-school studies, but how to structure an argumentative essay or a discursive one is the goal of university study courses, focusing on thesis, antithesis or synthesis structure-based approaches. Secondly, formality in English texts expressed by using complex sentences, the passive, discourse markers, high-level vocabulary, academic vocabulary is directly proportional to the level of language proficiency, which might limit some students. As a consequence, the students are expected to achieve CEFR level C1. Those whose language competence is lower are recommended to attend optional courses in English. From the cultural perspective, it is necessary to mention that Slovaks expressing their ideas and viewpoints use vague phrases and sentences quite a lot, as some years ago the people in this country could not express their attitudes openly without being repressed. What is more, in contrastive rhetoric Slavic languages are considered indirect, which influences organizing text (Carter, Jakes, 2009). Students were provided general guidelines for approaching essays, related to expressing their ideas clearly and precisely, providing specific examples, citing, paraphrasing, referencing, balancing the items, including only those which are relevant to the topic, etc.

In the practicing phase, the essays written by both control and experimental group students were commented on by teachers providing them with formative feedback, indicating for each student what their weaknesses are in these areas: communicative quality, ideas and organization, grammar and vocabulary and coherence. The students' abilities were not judged, on the contrary, students were provided information about the comprehensibility of their ideas or if they were able to convey their message. Feedback related to organization included comments on their organizational structure based on logical thinking, relevant arguments and supporting material. As far as grammar and vocabulary are concerned, the students obtained feedback on their range and control of grammatical structures and vocabulary. Creating coherent and cohesive discourse, using a wide range of connectors and other cohesive devices was the principle underlying the category of coherence.

Testing writing was based on the following task: Write an argumentative essay (1,400-1,500 words), which is to be published in the university journal, entitled *An EAP Course is Worth Doing*. Focus on the following points: developing study skills, improving English language and becoming aware of academic culture.

An analytic rating scale based on four marking criteria enabled the assessors to make assessment as objective as possible. These marking criteria are constantly used and students are familiar with them. The first criterion (task achievement) refers to the achievement of the purpose stated for the task, clear evidence of research, enough material to cover all the points and the clarity and relative easiness of the content to be understood. What is more, it includes use and acknowledgement of sources. The second criterion (organization) covers the genre aspects, and the arrangement of the text in the paragraph, the level of formality suitable for the intended audience. The third criterion refers to grammar and its range and accuracy. The vocabulary criterion emphasizes range, accuracy and appropriateness of the words and phrases (words in collocation) used.

In accordance with the ECTS system of grades, which was designed as an aid to the understanding of grades across national boundaries, the points gained by the students were transferred into the ranking system, which tells how a particular student performed relative to the remaining students. The Department of English language and Literature have agreed upon the classification system in which measurement of knowledge, skills and competences should be distributed into grades is as follows: A (100-92), B (91-85), C (84-79), D (78-73) and E (72-65).

Table 1 Scores of control group students versus scores of experimental group students

Students	A	B	C	D	E	FX
Control group	1 (8.33%)	2 (16.66%)	4 (33.33%)	1 (8.33%)	2 (16.66%)	2 (16.66%)
Experimental group	4 (33.33%)	3 (25.00%)	2 (16.66%)	2 (16.66%)	1 (8.33%)	0 (0%)

Despite the fact that the students from the control group were supervised how to produce an academic text in written English, they complained about non-systematic approaches, irregular meetings with their supervisors during their office hours, not enough time and room for practicing skills and academic language. The most disappointing results were achieved while assessing citing and referencing as the students were familiar with the introduction of the central registration of theses where all the theses are checked and students receive the

document called a certificate of originality, which is an inseparable part of the student's documentation related to the final examination.

2.3 Assessing presentations

After choosing the topic of their theses, the students were expected to retrieve information from different sources, present their viewpoints and take an active part in a professional discussion. The course was aimed at developing communicative competence of the students, focusing on presenting ideas and explaining their viewpoints, expressing the structure of their presentation, giving support to their statements and argumentation through gathered data, presenting different arguments and refuting them, persuading the audience, admitting defeat in the discussion and making conclusions. With the goal of providing an objective evaluation of the students' performances in mind, it was needed to set up an evaluation instrument. The designed rating scale consists of several categories related to three areas: information retrieval, presentation skills and language competence. The information retrieval section involves the choice of material and its relevance to the selected topic, analyzing and contrasting opposing viewpoints and synthesizing evidence and explanation. Presentation criteria contain the organization of the presentation, such as the introduction, the topic announcement, reasoning for the topic choice. During the development stage, apart from the ideas and supporting comments, the ways of creating independent ideas effectively and focusing on the most significant problems are assessed. At the end of the talk, the students are expected to recall the main aim and the major points of the talk. Descriptors of the rating scale allow assessors to measure fluency and readiness to answer the audience's questions and overall performance (eye contact, speaking without reading from papers, attracting the audience, movements, gestures, etc.). The last criterion - grammar and vocabulary is based on the range, accuracy and appropriateness of using typical EAP grammatical structures and academic vocabulary. This area refers to qualitative aspects of spoken language competence such as range, accuracy, fluency and coherence for oral production. In the interactional part of the presentation, the interaction aspect is replaced by the coherence aspect.

Table 2 Scores achieved by control group and experimental group students

Students	Organization	Presentation Skills	Language in Use
Control group	56.11%	58.62%	61.33%
Experimental group	64.35%	68.29%	69.67%

The students of both groups were familiar with the criteria from being trained how to assess their colleagues' performances and/or how to assess themselves. The crucial issues were discussed regularly, however, the experiment has revealed that they are better prepared theoretically than practically. Some of them admitted to not having rehearsed their presentations as they had underestimated its significance. The scores achieved by both groups are not substantially different, but slight improvement is recognizable and the results of the experiment will affect the selection of the material in the next academic year.

Presenting a thesis plays an important role in grading the thesis part of the final bachelor-degree examination. As it can be influenced by many aspects that can be classified as content-related (a clear purpose, message to communicate, relevant and new information) or delivery related (presentation techniques), the department considers training how to prepare and deliver a presentation as one of the key issues of an EAP course. Recent research in 2012 and 2013 has produced some interesting findings that students still have problems with covering only the main points of their research and showcasing the highlights of the research by summarizing the main ideas and the most interesting and convincing supporting points. Unlike previous years, a systematic approach to presentation skills was recognized in the 2013-2014 academic year.

3. Conclusion

On the basis of the findings from needs analysis 2010-2012, an online EAP course was designed and piloted within our Virtual University project. The course was officially recommended to English Major students who had

chosen their theses from the list presented by the Department of English Language and Literature of the Faculty of Education of Trnava University. Research measuring the impact of the course on development of academic study skills, language and culture was proposed to be conducted in the 2013-2014 academic year. The achievements of an experimental group of students were analyzed and statistically compared with the previous year measurements of the third-year students who applied for writing their theses in English and were systematically instructed by their supervisors who followed the same syllabus and the same materials. Both groups were students of their third year of studies in the bachelor-degree program. The experimental group consisted of 12 students who decided to attend an online course as they selected the thesis topics proposed by the department. The group of those who attended an online course was 18 but 6 students opted for the course for various reasons such as improving their English, getting credits required for completing a bachelor-degree program, etc., and these students are not included in our research as they did not intend to submit their theses and defend them. The students of the control group were those who selected their theses to be written in English but were obliged to attend tutorials with their supervisors. Comparing the study results, the students of the control group were better students as their English acquired at secondary-school was assessed at CEFR level B2. The experimental group included students with only a CEFR level B1 school-leaving examination (5 out of 12). The samples taken were quite small and drawing conclusions should be done very carefully, but research data indicate that after exposure to an online EAP course, the students from the experimental group were better prepared for writing their theses in English and were more confident in presenting their ideas, supporting and contrasting points, admitting defeat in discussion and completing presentations by expressing balance. Their English was more appropriate and natural as they could practice formal English independently at home as many times as they wanted. Introducing an academic culture typical for English speaking countries resulted in some changes in students' behavior. They were more curious, critical and honest. While last year, one student was accused of plagiarism, this year students mastered citation and referencing. As they were exposed to language in use exercises in natural authentic texts, their English was more English-like and the number of mistakes reduced by 30 percent.

From the cultural perspective, a limited number of students managed to present extracts from books and articles in a critical way and compare various approaches to the topic. However, quoting from books and articles while also acknowledging the source has increased in numbers (in 23 percent) and using the recommended web sites was significantly recognizable (increase to 68%). Using an online EAP course had a remarkable effect on working out the papers oneself as the students commented on in their questionnaires. Each time they were not sure how to write their essays or prepare their presentations, they went on-line and went through the theoretical part and read carefully the presented examples, working on their own papers or presentations.

The real impact on the students' performances was seen at the end of the summer semester when they were obliged to submit their theses and defend them orally. Unlike the previous year when one student failed (for plagiarism and not being able to defend her thesis orally but presenting it sufficiently), this academic year all the English Major students passed in both parts of the thesis examination despite the fact that in average they were weaker learners than those who completed their studies last year.

The department's slogan is that mastering another language means accepting a system of beliefs and values shared by a target community. Apart from many goals the department has set in training the students for their teaching career, the emphasis is laid on intercultural communication as a target culture can remarkably influence our approach to life in our home country as well.

To conclude, there is no need to measure the extent to which modern technologies expand our teaching horizons as the impact is clearly visible. The Virtual University project enabled us to enrich language teaching at our department, to look at ways to approach the growing area of teaching on-line and to use the Internet for both staff's and students' own professional development.

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INTE 2014

An empirical study on media literacy from the viewpoint of media

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Abstract

The most significant quality of the media in the way we use the word today that it has a very substantial influence area. As media is the indispensable part of the daily life, we need to question the new relationship structures which arise with media and the impact that media creates. The influence area that media creates could cause negative results as it could create new simulative realities to legitimize the dominant ideology, commercial mediation, alteration and conversion as much as positive results. To raise a conscious society against the negative influence of media, media literacy becomes crucial every passing day as a part of the education. In this context, as a result of the education which should be given for a society which researches, criticizes, questions and argue, we aim to raise individuals who are competent in media.

In the study, we focus on the negativities of media which are a part of media articles produced in corporate market structure, their producers, the negativities of the media which are a part of the individual's life and individual and its qualities which will work as filter against these negativities.

In this context the media literacy notion which is considered as the competency training of the media workers and their views on the training is being discussed. In the research, the views of the media managers and editorial structures of media with duties such as managing, producing and auditing media content are recorded with semi structured interview method and they are analyzed in the frame of titles created as they are discussed.

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Peer-review under responsibility of the Sakarya University.

Keywords: Media, training, media literacy, dominant ideology

Academic Background on Media Literacy

Media literacy is a set of perspectives that we actively use to expose ourselves to the media to interpret the meaning of the messages we encounter (Potter, 2005: 22). As the way Aufderheide describes it, media literacy is the ability to reach messages in different forms, to analyze and forward these (cited in Hobbs 1993). To be able to analyze media literacy right, you need to read and understand media accurately. But at this point, it is underlined that the media literacy is not only about reading the media messages of individuals, it is also an action in which they should take place in message creation and forwarding process by creating it (Inceoğlu, 2007:22).

Despite that the face to face communication is the most strong form of communication, the point that makes mass communication important is the wide range of effect area. A message which takes place in media is able to reach millions of people in a very short time. Frame of wide effect area provided scientists to focus on this subject and they come up with many different approaches. These approaches which are developed over source, message and recipient, take the hypodermic needle theory of Laswell as the basis. In this process which is named as the mainstream period, assessments were on the effects of the mass communication tools. Laswell remarks that the dominant ideology's power of molding public opinion by using mass communication tools. The causality

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principle lies behind the hypodermic needle. The needle and the bullet notions represent quick effects in the context of the theory. The needle which shows its effects on the body much faster compared to medicines represents the media messages. And media messages are considered as the messages placed into the syringe and they show instant and direct effect on masses. In this model which is also known as propaganda model, individuals are considered as missing the critical mind to resist the propaganda (Yaylagül, 2010:53). The governments were able to use mass communication tools very effectively in some periods. Radio was a very powerful propaganda device especially in World War II.

In researches between years 1960 and 1970, it became more important which purpose the individuals use the media for instead of what mass communication tools which are focused on target mass do to the people. The individuals use media to satisfy their primary and secondary needs. In this context, media messages are being preferred by the viewers willingly and according to needs. The media which satisfies the needs of individuals constitutes a source in the approach of use and satisfaction (Yaylagül, 2010:71).

The studies in 1970s which focused on short term individuality and selectivity are considered as a rupture period from Maigret, Lazarfeld view. Media would have long term effects on masses, "it affects a limited preference total by neutralizing the selectivity" not by the way of syringe. Mc Combs and Shaw express that the most important power that sets the agenda is the media in their agenda setting theory. Media focuses the attention on certain subjects (Maigret, 2012: 254-255). According to Cohen, "the press is very successful at saying people what they would think." (cited in McCombs and Shaw, 2009:127) The individuals stick with media to learn what's going on in the world. The media tells us what we will think on which subject; how, how much and when we should get information. This strengthens the mass media more and more. "Setting the agenda is the list of the subjects put in order with an increasing importance in the hierarchy of priorities" (Maigret, 2012:255).

The individuals show the tendency to know the things that media is into and accept its order of priority on different topics (McQuail and Windahl, 2010:132). Media provides information flow on the topics that it considers necessary to the agenda. In this context they give priority to ideological and commercial concerns. Why do some events take place in the first page and why some events take place in the later pages or don't at all? Media might give priority to some events in our names and it might ignore some events. So the agenda is being set by other in our names. Chief editors, editors, news directors, etc. which are named as gatekeepers make decisions in behalf of us and they shape the agenda by deciding which event would make the news and which will not. As some events stay on the headlines and subheadings for months, some events are presented as unimportant by not being published often (Güngör, 2011:98-99).

In media literacy, active individuals take place instead of passive individuals in the transition from mainstream media concept which has a conservative side to critical approach. The masses which earned the media talents would analyze the messages with "a vigilant eye". Critical autonomy is among the main purposes of media literacy to analyze the media messages correctly. Livingstone remarks the criticism of dominant ideology and questioning the critical literacy sides (cited in İnal, 2009:89-90).

Critical media literacy coincides with critical pedagogy concept. "*Critical pedagogy regards lesson schedule as a form of cultural politics.*" (McLaren, 2003:88 as cited in Binark & Bek, 2007: 40). Williamson's studies which he carried out with students in Griffith University of Australia in 1998 are important to explain the meaning of critical pedagogy frame. In the studies, after the schedule of the lesson and other activities are questioned, the students are actively involved in the lesson by using visual, audio and textual materials, discussion groups are created and it's supported with a website. Critical pedagogy which is being applied in the classes should explain the students the ideology, the stage behind its cultural capital and open it to discussion. (Binark & Bek, 2007:42-43) Critical media literacy also carries out studies to provide creating activism based on pedagogy, conscious actions, raising consciousness, sensibility and awareness on media.

As a part of media literacy studies, many scholars like Patrica Aufderheide, Len Masterman, Cyndy Scheibe and Faith Rogow are approaching fundamental principles of media education within the scope of specific topics. Aufderheide states that all the media consist of a world of fiction (cited in İnal, 2009:55). Media does not always present us the truth. As in the expression of Türkoğlu, *we only see the world from our homes. The events come to us. We are not able to go to events.* Türkoğlu focuses on the dream world the television creates. According to him, we are only looking at screen to collect the truth (Türkoğlu, 2007:156). Ünsal Oskay expresses that the culture

products mostly transferred to other generations through television, newspapers, radio and magazines and remarks that media has large and very precious areas of use to create a web of meaning (Oskay, 1992:128). The industrialization and modernization brought urbanization and life in masses with it. This process created a new type of culture which is named as “culture industry” by Adorno and Horkheimer. Mass culture products are designed, viewed, printed and published in institutes out of our control. Our position across mass culture products is passive as atomized passive individuals. The real purpose is to avoid reality (Oskay, 1998: 152-153). The consumption society shows keeping the mass away from the worry as the primary purpose of the life. “*Mediatic Hedonism*” which shows every minute of the life as the pleasure area (Oktay, 1995), designs eviscerated products in which “*dominant culture which centers on objects organizes the free time, conceals the sovereignty relations and turns dissatisfaction into satisfaction*” as Illich expressed (cited in Oktay, 1995:195).

In the “Media fictionalizes the truth” theory of Aufderheide (İnal, 2009:55), media doesn’t always present the truth to the masses. As in the phrase of Baudrillard, it creates a “so called world” and an artificial, simulated universe, pacifies the masses and make them believe that this world is real (Rigel et al, 2005:215).

“The media has commercial implication” (İnal, 2009:55) In the capitalist development phase, the profit effect became prominent in time. The media content which should include intensive information left its place to eviscerated, monotype, sensational messages which focus on sales. In the analysis of a media message, the first question that we need to answer is what is the economic structure that lies under the media product? Media products appeal to a market with a quite wide range. To meet the expectations, mass communication markets are formed and the individuals are modeled as consumers in this market. On the other hand, the other service sectors owned in the sense of monopolization and conglomerating in the scope of media ownership relations could make organizations more powerful and effective (İnal, 2009:56).

“Media involves ideological and value messages” (İnal, 2009:56). In capitalist production, the ruling financial power class also constitutes the ruling ideational power. In this situation, this region which lacks the intellectual production devices has to depend on the thoughts of this class. (Hall, 2005:199) Ideologies develop different ideology types and regions to legitimize their values. At this point, it uses the ideological devices of the government which are the police, education, union, mass communication tools. (Althusser, 2010:83). Media works under the authority of the ideology. The dominant ideology dominates the masses to foresee the system. According to Ozer, ideological government tools should be preferred instead of oppressive government tools. The effect scale of the media is not in forced wrong consciousness or altered attitudes but in the unconscious categories which provides the representation of the conditions and experience.” (Curan 1991:246 as cited in Özer 2009:26-27). As in the expression of Althuesser, the ideological tools of the government teach many skills. (2010:159)

“But they do this including in dominant ideology in a way that it provides the dominancy of this ideology's practice. All the production, exploitation, oppression officers and ideology professionals (Marx) should also adopt the ideology at a certain level to manage their duties consciously. So they should be the exploiters (proletariat), the exploiters (capitalists) or the helpers of exploitation (managing staff) or the priests of the dominant ideology (government officers) etc.”

At a simple communication process (source, message, receiver) the process between media and the society is perceived as a non problematic process. But the titles mentioned above clearly shows how complicated the structure is. In the frames of titles such as the fiction world that media creates, the messages that shape around the dominant ideology, media ownership structure, commercial mediation, etc, media literacy aims to raise individuals who master the substructure of media, think the media reality (able the discover qualities lie behind the current view), research, read and criticize. Creating necessary awareness would require a systemized media literacy education. (Öncel, 2007:85-86). Media literacy has found as a educational tool to protect individuals and especially children against the negative effects of the media (Öncel, 2007:87). Baran states that individuals could gain the following skills with this education (cited in İnal, 2009:47-48).

1. Ability to understand the power of the messages and analyze them.
2. Ability to differentiate emotional reactions from rational reactions while reacting to the content.
3. Improving the exaggerated expectations on media content.

4. Ability to analyze the structure which shapes according to the publication types and analyze the relation between them.
5. Ability to analyze the complicated inside language of the various media.

The media literacy studies which started in 1920s in Europe are starting to get prominent in our country too. Media literacy is included in the lessons starting from elementary school and alterations are being planned on the prepared curriculum. They focus on a curriculum that students could attend actively instead of a theory filled program, to make the lesson functional, to give students who are meshed with both traditional and social media the ability to analyze media messages correctly. One of the most criticized things in the process of education is the media literacy lesson is not being lectured by professionals. Of course it should be media experts or academicians who could lecture on media literacy and earn students media competency title.

Media literacy aims to raise individuals who could analyze the messages in media correctly and competent about the truth. In this context how should people in the media who are the source of these messages assess this subject? Is media literacy a threat in their perspective? The purpose of the study will be assessing of the media literacy and education from the eyes of the people in media.

The Purpose of the Research

Media literacy is a multidimensional concept with many interesting facets. There for we need to view it from many perspectives to appreciate all it has to offer (Potter, 2005:23). The purpose of the research; the media literacy lesson was included in curriculum starting from 2006-2007 education year for elementary school students intended for reading the media texts correctly, selectively and consciously. But an agreed system couldn't be determined and many alterations were made about the structure, content and lecture of the lesson. The study which Hobbs (2005:136), mentioned configured from the discussion about whether media literacy education is supported by media establishments or not is arranged towards to determine the views of the media professionals who create the content related to this education which is still being arranged and prepared for reading of the content produced by the communication tools.

2.1. The Model of the Research and The Collection of Data

This research which is prepared directed at determining the views of media workers on media literacy notion and media literacy education, is carried out by qualitative based researchers with semi structured interview method with open-ended questions. The advantages of structured interview technique is that the researcher can directly ask the question he/she wants to ask and reveal directly to the participants and he/she can simultaneously get the responses. (Ekiz, 2009: 127).

The questions which are prepared based on information gathered after a review of area literature are organized again after getting the views of 5 academicians who lectured on media literacy at least for an academic term.

The interviews which are based of semi structured interview form with selected chief editors, editors, directors and script writers, lasted 40 minutes in average and carried out by researches. The data is collected with audio recordings and deciphered later.

2.2. The Universe and The Sample

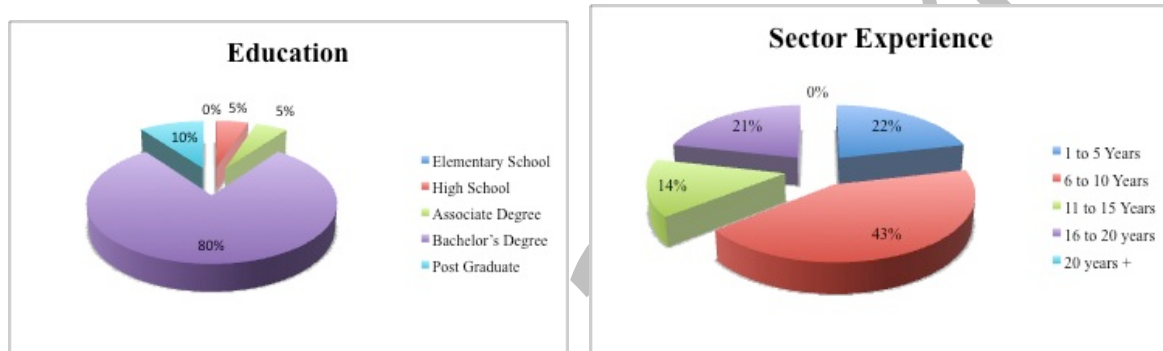
The universe of the research is formed by chief editors, editors, directors and script writers who have high level effect and control power on creating the content of national broadcasts in mass communication tools. When you consider the monopolization and conglomerating in the structure of media groups in our country, we see many media organs within the group. This is formed by a similar structure chain instead of bringing variety to publishing principles and concept. Therefore the interviews are carried out with people who could represent every determined media group. Hereunder the sample was based on carrying out interviews with workers who have all the predetermined qualities with scale sampling method and 20 participants are interviewed in total.

2.3. Analysis of the Data

Open coding method is used in the analysis since gathering data was based on open ended structure and qualitative research method was used. The following questions were indicated in the interview form:

1. What are the functions of the media? Could you assess the positive and negative sides of the media messages on the reader/audience?
2. Do mass communication tools set the public agenda? What are the factors which affect mass communication in the process of shaping of the media messages?
3. Could you comment on the reader/audience profile in Turkey? How do you assess the effect of the mass communication tools on the reader/audience?
4. What does media literacy notion mean to you?
5. There is not a clear, agreed study being applied about media literacy in Turkey. How should a successful media literacy education be in your opinion?
6. How would media literacy education affect the role of mass communication on the readers/audience?

Diagram 1. Education and the sector experience of the participants



- *Assessments on the positive / negative sides of the media functions and media messages on the readers/audience*

Many functions of media mentioned in communication literature. Laswell (1960) who pointed out the functions of the media for the first time, mentioned informing, convincing and socialization functions. Charles Wright (1961) added entertaining to these functions and Kenneth Boulding (1962) emphasized the product introduction function (Aziz, 1982:2) The general descriptions of the participants on the functions of the media coincides with this frame. According to the participants, informing the public about unknown, entertaining them, provide the right of getting intelligence, socialization, carrying out the duty of enlightening the public, presenting all kinds of information about life to attention of the public, delivering news to people objectively and truthfully are expressed as the functions of the media. A few participants described the applications of media (descriptions by using adjectives such as correct, independent, transparent) instead of functions. This indicates that they don't have clear and evident views on functions.

The participants couldn't make a clear differentiation between positive/negative sides of the media and media messages on the readers/audience in general. They discussed the differentiation based on some variables in media content. The participants emphasized on the application of the functions while assessing the negative sides of the media on the readers/audience. They emphasized the "abuse" side and mentioned that the news is manipulated to impose the ideologies and in some cases the transparency principle is being ignored. Also they expressed that media which has a power to create an effective public opinion, has a negative effect area on masses with falsified, twisted news. In addition, it could be seen that especially the news and content which incite violence with exaggerated expressions are increasing and this takes place in the expressions of the participants as a subject lies in the basis of negative effects. Three participants also mentioned the negative effects of an unreal world which is presented to viewers in the frame of government and advertiser as a result of commercial structuring of the media. They defined this with words such as "fake world", "simulation", "virtual world".

The point which all the participants agreed was that we would be able to talk about the positive sides of the media in the condition that the negativities they mentioned are appeased and “media is used correctly”

- *The role of the mass communication tools to create public agenda and the facts that affect the communication tools in the process of shaping of media messages.*

The participants mentioned that the mass communication tools have an effective role in creating the public agenda. Many of the participants expressed that the role of mass communication tools in setting agenda is increasing as the area of usage of social media become widespread. The participants remarked that the agenda is being set in the basis of media-politics relation in general.

Two of the participants argued that an independent broadcast concept should be adopted not to direct the media messages and another participant remarks that the effectiveness of politic climate in setting the agenda.

One of the participants argues that as the most important element that affects the process of shaping of media messages, the mass communication tools are used by dominant ideology to legitimize the power and speech and to manipulate the society.

A participant mentions that the dominant power that sets the agenda is the media-politics relation but rarely some political parties and non-governmental organizations are able to set the agenda according to amount of place they take in mass communication tools. Another participant remarked the obstacles which are originated from not risking the conflict with political power and points out that the mass communication tools are not being used effectively in public opposition and public awareness.

- *The assessment of the reader/audience profile in Turkey and the effect of mass communication tools on the readers/audience*

The participants assessed the reader/audience profile in the frame of these notions: A participant expressed them as an audience with “low education level”, “not questioning”, “accepting given unconditionally”, “lacking critical approach”, “unaware”, “conservative”, “only follow the broadcasts that fit with their views”, “not reading books”, “don’t have hobbies”, “ignorant” and another participant didn’t want to comment on them. Another one mentioned that it’s not possible to generalize the profile. Distinctly, a participant talked positively about the new generation, he mentioned a young generation which reads and knows what they want. Two participants, an editor and a director who work in television, mentioned the ratios of program types the audience watch instead of assessing the profile openly. According to the ratios, the contents are as following: Entertainment, music and tabloid press programs 70%, news and programs 20%, documentaries 5%, science 3%, technology 2%.

- *Media literacy notion*

Media literacy notion is expressed by participants as in the form it’s given in Table 1. 50% of the participants were able to describe media literacy correctly as a notion, 50% of them interpreted it differently.

Table 1. Views on media literacy notion

Views of media literacy notion	Number
Watching/reading and analyzing the media consciously.	10
Understanding the reader/audience	3
A wide responsibility area	1
Opinion leadership	1
Truthful/independent content production	5

The ones that were not able to describe the media literacy notion correctly in their assessments on the suggestion about successful media literacy and the effect of media literacy training and mass communication tools on the readers/audience are left out of evaluation.

- *Suggestions on a successful media literacy education*

The participants who described media literacy properly in general frame, had the following views which they agreed about the media literacy education: It should be given starting from young ages, should be applied practically, it should be given by media specialists which are not influenced by the political power, it should focus on the sub texts, it should include an education structure which aims to research different sources.

One of the participants added a different point of view about reaching media literacy goals with the expression "...It would be optimism to think that people would not be poisoned when they drink water if the water source is poisoned. Therefore education should start from the media in my opinion and this way the mass would reach true news, as the education level and other factors improve, we could set up an effective and rightful system..."

- *How would media literacy education affect the role of mass communication tools on the readers/audience?*

The participants argued that as the readers/audience get informed about the contents and texts on media with media literacy, media will be free from being a tool for the dominant ideology and it will have to get back its actual ability to inform people completely and objectively.

Conclusion

Media literacy aims to raise individuals who think, research, read and criticize. In this context, a systematic media literacy education should be structured to raise necessary awareness. The education studies which are ongoing since 1920s in Europe became prominent in Turkey in recent years but they didn't get functionality at a sufficient level. The content of the lesson which is planned as the continuation of the traditional education system fell short in many areas with its theoretical structure. Therefore it could only be possible with an applied program to give students the ability to analyze media correctly.

According to the findings, we see that the participants who are in the sector for a long period defined the functions of the structure they are in correctly and opposing to these positive functions, they remarked the negative role of the media on the audience in functionality. The participants agree that the public agenda is being set by the media but they have different opinions on the formation basis of the agenda. Many of the participants express that agenda is being set in the circle of media and politics and it is being dictated on the public. Some of them suggest that with the agenda, the dominant ideology reaches to public through the media.

The participants' reader profile in Turkey was described with negative descriptions. Media professionals who described the media literacy notion correctly and made appropriate suggestions for a successful education, argue that a systematic education could get rid of ethical defects in media and negative roles on the audience with the virtual world which has been created for the audience. They express that instead of an audience who doesn't question, accepts everything preliminarily, who doesn't think about the truth and/or actual purpose and accepts the messages directly and shapes all his life, beliefs, politic views according to these messages; across an audience who is informed about media messages, the media would be more independent, more objective, more transparent and without the concerns about sales and ratings, the media which couldn't be structured around media ownership, the necessity of broadcasting notion would become important.

As a result, the media literacy education is not only important about raising the awareness of the audience, it's also important about fulfilling the requirements of broadcasting notion.

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İNTE 2014

An evaluation of teacher candidates' opinions about art education and form-meaning relationship

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Abstract

We live in an age in which visibility is important. In this day and time, instead of long texts and narrations, incarnated forms of meaning and notions are used for informational transfer. As to the reach of an individual for abstract notions, it is a competence of that individual which is gained by the education. Due to the indispensable contributions of art education classes have on an individual's reasoning and imagination, they also directly contribute to development of said individual's cognitive abilities.

This research aims to evaluate the ability of thinking in expressible meanings of forms, examined among the teacher candidates who took visual arts education and art and aesthetics class in 2012-2013 academic year, majoring in pre-school teaching and social studies teaching respectively. Purpose is to present how teaching candidates develop the form-meaning relationship. A total of 298 teacher candidates were involved in the research. Symbols such as circle, triangle, square, tree, pencil, hand, fish, flying bird, wheel, bitten apple, and yin-yang were shown to these teacher candidates before and after 12 weeks curriculum, and it is asked from them to answer the question of what these symbols are and what may they express. Finally, answers were evaluated using qualitative research model.

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Keywords: Art, Art Education, Form and Meaning, Visual Perception, Visual Thinking

1. Introductions

Visual art education classes designed for general education majors except arts follows a process which intends to develop individual's visual thinking abilities that could be used in all aspects of life. The purpose of using art in education is to develop a certain individual's visual perception. Considering forms that are perceived through visual senses along with their expressed meanings (notions) and relating form and meaning in an intellectual sense are among the aims of visual arts education.

Cognitive functions are important in the learning process. However, the main material for cognitive functions is senses. A person learns by cognitively processing the gathered information by smell, taste, tactile, auditory and visual senses. Only eye provides substantial information about the outside world and that world's

⁴⁹This research has been supported by Marmara University Scientific Research Project Committee under Project number EGT-D-120514-0210

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objects that other senses cannot provide such as colors, forms, movements, distances and depth. Thus, visual sense compared to other senses, provides a clear transmission medium, creating the best setting for using the intellect (Arnheim, 2007). According to Arnheim (2007), who asserts that the most powerful tools for strengthening the cognitive component are visual arts education classes and without cognitive component it is impossible for an individual to develop creative thought in any area, there is no actual reason for not calling the processes of visual sense “thinking”. Because, thinking is cognitive in its essence, and visual sense is visual thinking.

Thinking is a chain of evolving rings of concrete to abstract, form to meaning, which starts with perception. The data of visual perception joins to one another in a way such as designing in mind, relating, questioning, analyzing, observing, interpreting, testing, deciding, re-interpreting, evaluating and implementation which ends up with interpretation (Abacı, 2003). All these processes are used in visual arts education. Examining an artwork, evaluating in a different context and understanding makes an individual experience visual learning.

Eye sees the concrete and compare what it sees with other concrete similar. After that, it grasps the form's notion which is invisible but makes its presence felt with the form. Symbols are formed states of abstract notions and they are the last stage of visual perception. An individual who has trained his own perceptions can read between the lines of symbols and make sense of it.

Since first age, visibility has an importance in human thinking system. Everything can be explained in an easier way visually. Visual communication has helped visual thinking abilities to develop. This is a circle without any start or end, evolving and reproducing. Expressing with form, in another words expression of social essence with symbols goes way back to societies without writing. Every culture expresses its social experiences with symbols. Civilization history shows that, symbols and symbolic compositions drawn in different times and places repeatedly are based on semantic values known and accepted by a society, not on personal interpretations (Ateş, 2001).

Societies, which go way back in time, are known for how they pass their values down. This is also correct for the geography which we are living on. Anatolia is a synthesis of rich cultures. Among our cultural richness, common feelings such as agony, joy, sadness, and enthusiasm are brought to forms by symbols and these became the language of Anatolian nations. We live in a culture which makes use of symbols. Some objects express a lot in our culture. Symbolized forms can be found in carpet and rug designs, head scarfs' point laces, fabric patterns, tiles and carvings on stone buildings. People of Anatolia have transformed symbols into a common language in years.

How do our people use their visual perceptions who have thought visually for centuries? Do they think that the forms they see mean something, or question their meanings? How do our youth do concerning abstract thinking whom we think as our future intelligentsia? In light of these questions, the purpose of this research is to determine the visual perception abilities of teacher candidates who are in their twenties and in the abstract thinking phase; make them be able to use the visual perception and thinking abilities they will acquire in visual arts classes and have them see and interpret the forms with expressible abstract notions.

2. Methodology and Sampling

This research is conducted by the participation of teacher candidates studying in Marmara University, Atatürk Faculty of Education, who took visual arts education and art and aesthetics class in 2012-2013 academic year, majoring in pre-school teaching and social studies teaching respectively. A total of 298 students have participated in the research, 205 of them belonging the first group mentioned whereas 93 of them belonging the second. During the research, teacher candidates have been presented with 12 black and white visuals, not only in the beginning of the term but also in the end of it. Moreover, they were asked to describe what these visuals are and what they mean via narration. The essays are examined and a report is prepared based on qualitative research method.

3. Data Collection Instruments

The data is generated based on the meanings expressed in the essays presented both at the start and at the end of the term concerning the 12 forms given in the visuals as circle, square, tree, apple, bitten apple, pencil, hand, fish, flying bird, wheel and yin-yang symbols. The context of the answers is evaluated by qualitative research method and a report is prepared.

4. Educational Program

298 teacher candidates are asked from them to describe the given 12 black and white visuals in their narrative essays in terms of what they are and what they can be. During the academic term the art objects civilizations produced since primeval era are examined, analyzed and evaluated by the aesthetics doctrine of our age. The studies focused in how every civilization's essence have formed in its art produced, how every form has layers of meaning, and how these hidden meanings can be reached by analyzing the form. In a manner of speaking, civilizations are analyzed through their artworks. At the end of the academic term, the same visuals are presented to the teacher candidates and they are again asked to describe what they are and what they can be. During the academic term and process of the research, the teaching method and techniques used involved analysis and interpretation of visuals with the educational objectives of developing abstract thinking ability, and being able to consider the layers of meaning behind concrete forms.

5. Analysis of the Data

During the research, the answers provided by teacher candidates in their essays regarding the 12 visuals shown are analyzed.

In the period of examination and evaluation of the essays qualitative research method is used. Reading the narrations, interpreting the explanations is fundamental to qualitative research method. Qualitative research method tries to understand the acts, narrations and how these intersect (Glesne, 2012). Qualitative data can be made used of since qualitative research method is not a process which data is reduced to numbers and analyzed like that. Thus, concrete object statements and abstract notion and meaning statements are deduced from the answers in numbers and the percentage is calculated. The resulting report is prepared by quantitative classing based on the context of the answers.

Table 1: Pre-school Teaching Candidates and Social Studies Teaching Candidates

Start of Academic Term	Form	%	Meaning	%	Total
Circle	245	82.2	53	17.8	298
Triangle	263	88.2	33	11.8	298
Square	259	86.9	39	13.1	298
Tree	222	74.4	76	25.6	298
Apple	238	79.8	60	20.2	298
Bitten Apple	245	82.2	53	17.8	298
Hand	142	47.6	156	52.4	298
Pencil	173	58.1	125	41.9	298
Fish	233	78.2	65	21.8	298
Flying Bird	101	33.8	197	66.2	298
Wheel	276	92.6	22	7.4	298
Yin-Yang	67	22.5	231	77.5	298

Table 2: Pre-school Teaching Candidates

Start of Academic Term	Form	%	Meaning	%	Total
Circle	177	86.3	28	13.7	205
Triangle	183	89.2	22	10.8	205
Square	180	87.8	25	12.2	205

Tree	162	79.0	43	21.0	205
Apple	157	76.6	48	23.4	205
Bitten Apple	175	85.3	30	14.7	205
Hand	101	49.2	104	50.8	205
Pencil	125	61.0	80	39.0	205
Fish	162	79.0	43	21.0	205
Flying Bird	71	34.7	134	65.3	205
Wheel	191	93.2	14	6.8	205
Yin-Yang	40	19.5	165	80.5	205

Table 3: Social Studies Teaching Candidates

Start of Academic Term	Form	%	Meaning	%	Total
Circle	68	73.1	25	26.9	93
Triangle	80	86.0	13	14.0	93
Square	79	85.0	14	15.0	93
Tree	60	64.5	33	35.5	93
Apple	81	87.0	12	13.0	93
Bitten Apple	70	75.2	23	24.8	93
Hand	41	44.0	52	60.0	93
Pencil	48	51.6	45	48.4	93
Fish	71	76.3	22	23.7	93
Flying Bird	30	32.2	63	67.8	93
Wheel	85	91.3	8	8.7	93
Yin-Yang	27	29.0	66	71.0	93

6. Results

A person starts thinking from the concrete. Abstract notions became after concrete form is examined. For this reason, during the process of classification of the answers in the essays, even if there is an abstract value in the answer, that teacher candidate's answer's meaning is classified in meaning section.

Circle, 82.2% of 298 teacher candidates described circle as concrete objects such as Moon, Sun, ball, Earth, ring, plate, bracelet, watermelon, money, steering wheel, wheel, pizza and clock; whereas 17.8% of teacher candidates mentioned meanings such as loyalty, togetherness, solidarity, integrity, belief, flexibility, vicious cycle, and harmony. This ratio for pre-school teacher candidates is 86.3 to 13.7 and for social studies teacher candidates 73.1 to 26.9.

Triangle, 88.2% of 298 teacher candidates described triangle as concrete objects such as cheese slice, roof, pyramid, mountain, and kite; whereas 17.8% of teacher candidates mentioned meanings such as hierarchy, class discrimination, increase, summit, and intersection. This ratio for pre-school teacher candidates is 89.2 to 10.8 and for social studies teacher candidates 86.0 to 14.0.

Square, 86.9% of 298 teacher candidates described square as concrete objects such as cube, dice, room, box, book, table, carpet, tile, server on which engagement rings are presented and a house without a roof; whereas 13.1% of teacher candidates mentioned meanings such as government agency, limit, straight, standard scheme, and symmetry, equality. This ratio for pre-school teacher candidates is 87.8 to 12.2 and for social studies teacher candidates 85.0 to 15.0.

Tree, 74.4% of 298 teacher candidates described tree as concrete objects such as fruit, shadow, forest, firewood, heating stove, hammock, vacation, nature, green, branch, leaf, apple, root, swing, spring, and picnic; whereas 25.6% of teacher candidates mentioned meanings such as lifetime, family, time, force, power, prosperity, home's plane tree, taking root. This ratio for pre-school teacher candidates is 79.0 to 21.0 and for social studies teacher candidates 64.5 to 35.5.

Apple, 79.8% of 298 teacher candidates described apple as concrete objects such as garden, worm, tree, and fruit; whereas 20.2% of teacher candidates mentioned meanings such as red, green, antique beauty

contest, witch of Snow White, banishment of Adam and Eve from Heaven, and law of gravity of Newton. This ratio for pre-school teacher candidates is 76.6 to 23.4 and for social studies teacher candidates 87.0 to 13.0.

Bitten Apple, 82.2% of 298 teacher candidates described bitten apple as concrete objects such as cartoon, technological products, I-Phone, solid, and tooth; whereas 17.8% of teacher candidates mentioned meanings such as forbidden love, deficiency, and rot. This ratio for pre-school teacher candidates is 85.3 to 17.7 and for social studies teacher candidates 75.0 to 25.0.

Hand, 47.6% of 298 teacher candidates described hand as concrete objects such as gloves, finger, rig, dishwashing gloves, nail polish, hand cream, and solitaire ring; whereas 52.4% of teacher candidates mentioned meanings such as art, labor, working, cooperation, peace, oppression, slap, mother love, and friendship. This ratio for pre-school teacher candidates is 49.2 to 52.8 and for social studies teacher candidates 44.0 to 60.0.

Pencil, 58.1% of 298 teacher candidates described pencil as concrete objects such as wood, pencil sharpener, sword, minaret, class, arrow, rocket, make-up pencil, and stick; whereas 41.9% of teacher candidates mentioned meanings such as science, knowledge, poetry, future, civilization, success, culture, and career. This ratio for pre-school teacher candidates is 61.0 to 39.0 and for social studies teacher candidates 51.6 to 48.4.

Fish, 78.2% of 298 teacher candidates described fish as concrete objects such as anchovy, fish oil, deep fry, grill, fishing rod, Istanbul, raki, Eminönü district, aquarium, rocket, appetizer, Finding Nemo, and the story of Little Black Fish; whereas 21.8% of teacher candidates mentioned meanings such as fortune, captivity, memory, emotiveness, March, and Aquarius of Zodiac. This ratio for pre-school teacher candidates is 79.0 to 21.0 and for social studies teacher candidates 76.3 to 23.7.

Flying Bird, 33.8% of 298 teacher candidates described flying bird as concrete objects such as ferry, Istanbul, pigeon, eagle, seagull, wing, beak, and bird nest ; whereas 66.2% of teacher candidates mentioned meanings such as peace, freedom, struggle, love, migration, luck, eternity, infinity, messenger, and Phoenix. This ratio for pre-school teacher candidates is 34.7 to 65.3 and for social studies teacher candidates 32.2 to 67.8.

Wheel, 92.6% of 298 teacher candidates described wheel as concrete objects such as car, wheel, wheel of fortune, compass rose, eye, umbrella, sun, propeller, and journey; whereas 7.4% of teacher candidates mentioned meanings such as labor, antique age, invention, and civilization. This ratio for pre-school teacher candidates is 93.2 to 6.8 and for social studies teacher candidates 91.3 to 8.7.

Yin-Yang, 22.5% of 298 teacher candidates described Yin-Yang as concrete objects such as water drop, comma, seed, pea, cashew, twins, chicken drumstick, and embryo; whereas 77.5% of teacher candidates mentioned meanings such as contrast, good and bad, male and female, night and day, integrity, balance, completion, and energy. This ratio for pre-school teacher candidates is 19.5 to 80.5 and for social studies teacher candidates 29.0 to 71.0.

The study which was redone at the end of the academic term, it is noticed that every teacher candidate expressed every form with their respective abstract meanings.

7. Conclusion and Recommendation

Circle, triangle and square are not just geometrical figures. Throughout history, societies that have formed great civilizations attributed meanings to these figures. Circle is, for example, is the continuation of the same movement with no corners, no start and no end. When we examine the symbols concerning circle in history, we see that it has been concretized with the serpent biting its own tail, Ouroboros. It symbolizes universe and

integrity in antique Egypt and Greece; in Hinduism and Buddhism, it is the symbol of death and reincarnation. In our age, the symbol of circle is used to describe a vicious cycle (Gibson, 2013). Triangle, according to the pointy side being up or down, symbolizes masculinity and fire or femininity and water (Gibson, 2013). As to square, giving the feel of robustness and stability, it symbolizes Earth and matter. Also, because of having four sides, it represents cardinal points, elements and seasons (Gibson, 2013). It is presumed that Leonardo Da Vinci expressed the humanity's two aspects with intertwining square and circle figures his Vitruvian Man, it is believed that the square represents the corporeality, while the circle represents the incorporeality. At the same time, circle represents the eastern civilization which has an unchanged order for centuries; while square represents the western civilization which has gone through social changes and produced revolutions.

Ever since ancient times, the tree of life symbol exists in the societies in our geography which has its branches and fruits reaching for skies. Tree represents past with its roots, present with its trunk, and future with its branches. Big families and countries are identified with a steady tree with powerful roots. According to Gibson (2013), tree represents cycle of life if it cast its leaves and immortality if it is evergreen.

Apple is known as the fruit that is forbidden in legends, poisonous in fairy tales, and as the fruit which has fallen from the branch proving the law of gravity to Newton in science. It does not just grow on a tree, or sold at a market. Bitten apple; however, is the expression of irreversible situations while being the symbol of a brand. It is the fruit that Eve has bitten, causing for Adam and her to get banished from heavens, forcing them to make their way on earth.

Historians interpret handprints that are seen very frequently in ancient works as an expression of possession. It is the symbol of identity. In our culture when the proverbs are examined, it represents cooperation, work sharing and labor.

Pencil has always been the symbol of the thinking brain and educated individual. Aside from that, in our culture, there are sayings such as "moving a pencil" meaning providing self-benefit and "got his pencil broken" meaning falling from grace.

Fish represents idealism in human beings while bird has always been the symbol of freedom. In the legends, Phoenix has been the symbol of ascent and reincarnation by being reborn from its own ashes.

The civilization process of human is in one sense the history of creativity. One of the first inventions is the invention of the wheel which is used not only in transportation but also in potter's wheel, providing momentum to the society and expanding the horizons of people.

Yin-Yang is a symbol of far-east known worldwide. The black half of the symbol represents passive, negative, feminine cosmic energy; identified with darkness, night, moon, cold, humidity and Earth. The white half of the symbol is active, positive and masculine. It corresponds to light, day, warmth, dryness, and sky. The symbol overall represents a complete eternal life cycle (Gibson, 2013).

When the numerical results gathered throughout the study are examined, it is seen that the teacher candidates are not able to think of the meanings symbolized by the forms yet. Every figure showed was compared to its concrete similar with by 80% of the teacher candidates, and it was not considered by them that they might mean abstract values. In fact, these teacher candidates should have acquired the skill of abstract thinking because of their ages. This situation brings one's mind that they have been distant to their cultural environment and they have blunted their intellectual sides in the process of periodical exam cramming. It seems the main reason for this might have been that they simply did not have time to read novels, visit museums or be interested in different disciplines of art; which all would have helped them with acquiring the skill of abstract thinking.

It is seen that social studies teacher candidates showed slightly better results in terms of abstract thinking compared to pre-school teacher candidates. However, if the general situation is considered, this is not enough

as well. But the ratio changes when the Yin-Yang symbol is of concern. It is seen that 77.5% of teacher candidates expressed the abstract meanings of the symbol. It is supposed that the reason for this particular result is Yin-Yang symbol being recognized symbol. The result of them knowing the meaning of the symbols they have learned such as Yin-Yang shows us that they are better learners than thinkers.

After an academic term that the teacher candidates have attended classes of visual art education and art and aesthetics, and examining the layers of meaning hidden behind figures' visible sides, it is determined that their views changed completely. This situation is considered as the outcome of a lack in our education system. This situation is considered as being the saddening result of the fact that the teacher candidates have been through an exam cramming type education system which highly depends on memorization of the information transferred by an authority; instead of the usage of education programs which develops abstract thinking.

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An evaluation of the effectiveness of committees of teachers according to the teachers' views, Ankara province sample

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Abstract

Achieving the required success in the education is possible by conducting the educational processes with a participant and common endeavor more than an individual effort. On this account, it is important to drive the committees of teachers effectively for the efficiency of the educational activities implemented at the schools. In this study, it was aimed to evaluate the committees of teachers, hold in Ankara, based on the views of the teachers and to identify the basic problems with solution recommendations. 1549 teachers, work in 25 different districts of Ankara, were the sample of the study. The views of the participant teachers about committees of teachers were modified by the survey method. A 5-point likert scale was used as a data collection tool. Also 3 open ended items were added to the survey form in order to determine the original ideas of the teachers and the answers of these questions were evaluated by the content analysis method.

Considering the findings of the study, it was come to a conclusion that, the committees of teachers were hold actively according to the related by-laws; however the problem-focused atmospheres of the committees overshadows the effectiveness of the committees. Participant teachers also declared that the waving aside the results of the committees by the concerned authorized units, the existence of some shortages in the educational processes as the main reasons that frustrate the reflection of the resolutions brought up in the committees.

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Peer-review under responsibility of the Sakarya University.

Keywords: Committees of Teachers, Evaluation, Teacher' Views

1.Introduction

The constant change and events experienced in the world have an impact on utilized technologies, the lifestyles of societies, and the required individual characteristics and make development challenging. As in other areas, the need for development has unraveled. This need is felt in educational institutions and has rendered taking some measures for enhancing quality necessary. For the purpose of planning and developing educational activities expressed in primary and secondary education institutions, it is important that meetings of the Committee of Teachers (CoT), where common and participatory decisions can be made, are conducted in an efficient manner.

CoT meetings are conducted by teachers of the same branch or teachers teaching the same year convening for the purpose of effectively implementing curriculums at schools within the framework of a common understanding. These meetings are conducted at least 3 times in an academic year and by means of some arrangements made in education, supporting the academic development of students is aimed. Besides these, when the contributions of decisions made in CoT meetings to the development of an educational understanding suiting the school identity and the enhancement of communication processes between teachers are taken into consideration, it would be correct to say that these meetings are of significance in terms of supporting the dynamics of the institution.

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Many stakeholders have duties in concluding educational processes in schools with desired attainments. It is beyond any doubt that teachers have the most responsibility among these stakeholders. Therefore, the individual competence and efforts of teachers are criteria requiring consideration besides working in harmony with other teachers in the institution and with the same commitment for the fulfillment of the said responsibilities. Due to all these stated facts, the Ministry of National Education has specified required actions for organizing educational activities at schools through CoT meetings in a regulation as follows (MEB, 2012).

***Article 95**—Committees of teachers consist of primary school teachers teaching the same year at primary schools and branch teachers, if any. They consist of branch teachers in middle schools and Islamic middle schools. The committees of teachers convene at the beginning, middle, and end of the academic year and when required in line with the plans of the school administration. The meetings are chaired by a deputy-principal to be assigned by the school principal or a teacher to be elected among branch teachers. The issues of the consistent implementation of curriculums and lessons, effective utilization of the lesson instruments, laboratory, library, sports hall, technology and design, information technology, visual arts, and music classrooms, and project and performance assignments are determined in these meetings. Examples and materials are prepared depending on the characteristics of the course, and a common understanding is formed.*

The following are performed by the committees of teachers:

- a) Curriculums are examined, and a common understanding is formed.*
- b) Challenges experienced in practice are discussed and solutions are sought.*
- c) The study and education status of students and the characteristics of the environment are examined, and decisions are made on measures to be taken.*
- d) A consensus is reached on the implementation of plans to be prepared with regards to educational activities.*
- e) New professional works and developments in the field of education are examined.*
- f) Joint evaluation and measurement instruments are prepared in order to be implemented and utilized.*
- g) The committees of teachers prepared a report evaluating the curriculums, relevant legislation, lesson tools-instruments, teaching methods and techniques, physical status in the school and classrooms, and student achievement level at the end of the academic year and submit it to the school administration.*
- ı) The principles and procedures, question forms, question topics, and dates for exams to be held each term are determined at the beginning of the term. Joint exam results are evaluated by teachers at the committees of teachers and submitted to the school administration in the form of a report.*

As it can be observed in the articles of the relevant regulation, the CoT is an important decision making mechanism dealing with the planning, practice, and evaluation aspects of educational activities with a holistic approach aiming to make the most effective decisions according to the characteristics of the institution and environment. Thus, the top-level implementation of decisions that have been made is as important as the optimal performance of such meetings for functionality purposes. Evaluating the efficiency of CoT meetings in practice according to teacher views and determining the level of practicability have been aimed with this study. It is anticipated that the results of the study shall contribute to the organization and development of future CoT meetings at schools. In line with this objective, answers have been sought for the following questions in the study:

What are the views of teachers concerning committees of teachers meetings?

1. What are the views of teachers concerning activities performed at committees of teachers meetings by virtue of the relevant regulation?
2. What are the views of teachers concerning the functioning of committees of teachers meetings?
3. What are the views of teachers on the effects of committees of teachers meetings on educational processes?
4. What are the suggestions of teachers for the development of committees of teachers meetings?

2. Method

2.1 Model of the

The operation survey method study in order to condition. The approach aiming existing in the existing in a order to reach a the universe elements, on the entire group or sample universe in this (Karasar,2012).

		f	%
Gender	Woman	942	61
	Man	607	39
Educational Status	Two year degree	80	11
	Licence	595	82
	Master degree	48	7
	Phd	6	1
Seniority	1-5 Years	364	23
	6-10 Years	340	22
	11-15 Years	312	22
	16-20 Years	269	17
	21 + Years	264	16
Type of School	Elementary School	870	56
	Secondary School	170	11
	Primary School	340	22
	Religious Secondary School	169	11
Total		1549	100

Study

steps pertaining to the were utilized in the determine the existing survey method is an to describe a condition past and currently manner as it is. In general judgment on consisting of many surveying is performed universe or a sample to be taken from the method

2.2 Universe and

Sample

The universe of the study consists of teachers working in the province of Ankara during the 2013-2014 academic year. The sample of the study consists of 1549 randomly designated teachers working in various types of schools in the 25 districts of Ankara. The characteristics of participating teachers have been provided in Table 1.

Table 1: Characteristics of participating teachers

As it can be observed in Table 1, a majority of participating teachers consist of female teachers with a seniority of 5 years and more. When school types are examined, teachers working in primary schools constitute a majority, and it can be said that primary school and branch teachers provide a contribution to the study at the same extent.

2.3 Data Collection Instrument

A draft questionnaire was prepared by the investigator in the study as a data collection instrument. This draft consists of two sections covering questions for determining the demographic characteristics of participating teachers and 31 5-point likert-type questions. Views of teachers on CoT meetings was attempted to be determined with a grading scale varying between "I completely disagree" and "I completely agree."

Experts in the field were consulted for the evaluation and reliability of the scale, and it was corrected according to expert opinions. The prepared scale was applied to a group of 120 teachers for trial purposes. A factor analysis was performed as a result of the preliminary test, and the number of items was reduced to 27 in order to ensure content validity. The overall Cronbach Alpha reliability coefficient of the final scale was determined to be .89.

2.4 Data Collection and Analysis

The questionnaire consisting of 27 items was finalized and applied to 1549 teachers from various branches. Data collected from the teachers were analyzed using the SPSS 15.0 (Statistical Package for Social Sciences) program. The frequency and percentage values of the obtained data were collected. Answers of open-ended questions were evaluated through an analysis evaluation. Results obtained in the study were interpreted and presented according to sub-questions.

3. Findings

The findings have been presented in this section according to study problems.

3.1 Findings pertaining to the First Sub-Problem

There are 9 items concerning the 1st sub-problem in the questionnaire used as an instrument of measurement. These items and the percentages and frequencies of responses of participants to these items have been presented in Table 2.

	Completely Disagree		Disagree		Variable		Agree		Completely Agree	
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
Activities of the previous academic year are evaluated at the CoT meetings.	63	4	123	8	77	5	511	33	775	50
Methods and techniques to be applied in lessons are determined in the CoT meetings.	77	5	93	6	93	6	434	28	852	55
The teaching methods to be employed, subjects and times of assignments, scope, type, and criteria of exams are determined in the CoT meetings.	93	6	93	6	123	8	310	20	930	60
Means of utilizing lesson equipment-tools are determined and suggestions are presented in the CoT meetings.	108	7	93	6	108	7	542	35	698	45
Current curriculums are examined and evaluated in the CoT meetings.	140	9	77	5	123	8	434	28	775	50
The utilization of demonstration and practical teaching method locations such as laboratories, workshops, and technology classrooms, utilizing tools, and related plans and principles are determined in the CoT meetings.	170	11	155	10	186	12	573	37	465	30
Common evaluation and assessment instruments for	248	16	186	12	186	12	325	21	604	40

implementation and evaluation purposes are developed in the CoT meetings.											
Professional works and developments in the field of education are examined in the CoT meetings.	310	20	201	13	263	17	341	22	434	28	
Total	1549					100					

Table 2: Views of teachers on activities in CoT meetings (by virtue of the relevant regulation)

When Table 2 is examined, it is striking that teachers participating in the study generally have positive views concerning nearly all of the items. It can be observed that the 83% majority of participating teachers have the view that the previous academic year is evaluated and methods and techniques to be applied in lessons are determined in the CoT meetings. Furthermore, according to the table, it can be said that an 80% majority of teachers consider the meetings to be functional in terms of the methods and materials to be employed in the teaching process and the determination of a common evaluation and assessment approach.

3.2 Findings pertaining to the Second Sub-Problem

As it can be observed in Table 3, there are 10 items in the evaluation instrument for the determination of teacher views on the functioning of CoT meetings.

Table 3: View of Teachers on the Functioning of meetings of Committees of Teachers

	Completely Disagree		Disagree		Variable		Agree		Completely Agree	
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%

CoT meetings are conducted according to principles specified in the relevant regulation.	45	3	63	4	154	10	543	35	744	48	
Items on the agenda are formed with the consensus of all teachers at CoT meetings.	139	9	124	8	155	10	605	39	526	34	
Teachers are notified on time on the CoT meetings conducted at a provincial level.	186	12	108	7	170	11	434	28	651	42	
CoT meetings are conducted as required within the year.	125	8	233	15	140	9	450	29	601	39	
The election of chairpersons of CoT meetings is performed on a voluntary basis.	264	17	309	20	154	10	356	27	466	30	
Meetings are conducted with a problem-oriented structure.	93	6	403	26	279	18	356	23	418	27	
Decisions made in the meetings are not evaluated by concerned persons or institutions.	217	14	279	18	372	24	294	19	387	25	
Meeting minutes are taken into consideration by concerned units.	310	20	373	24	185	12	262	17	419	27	
Items discussed in the meeting are evaluated in-depth.	434	28	403	26	216	14	141	9	355	23	
CoT meetings are not implemented with desired efficiency.	480	31	216	14	262	17	419	27	172	11	
Total					1549						100

When responses from participants are examined, it can be observed that teachers have stated some deficiencies besides positive characteristics of the functioning of CoT meetings. Accordingly, it is striking that 83% of teachers consider meetings to be conducted according to the general principles specified in the regulation, and a majority of 70% have the view that meeting items are determined with a consensus and held at adequate numbers. Nearly half of the teachers believe that items of the agenda are not actively discussed, and meetings are not conducted in an effective manner.

3.3 Findings pertaining to the Third Sub-Problem

Table 4: Views of teachers on the Effectiveness of CoT Meetings on educational processes

	Completely Disagree		Disagree		Variable		Agree		Completely Agree	
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
The meetings increase sharing between teachers of the committee.	109	7	76	5	154	10	466	30	744	48
CoT meetings ensure integrity in education and enhance quality.	139	9	47	3	155	10	682	44	526	34
Meetings are beneficial in determining and implementing a strategy.	154	10	108	7	263	17	450	29	574	37
CoT meeting decisions are not taken into consideration in practice.	185	12	202	13	216	14	434	28	512	32
	1549						100			

When Table 4 is examined, except for one teacher, it is striking that teachers have positive views concerning the relevant items. When responses of participating teachers are examined, it can be observed that teachers mainly consider CoT meetings to have positive contributions to educational processes; however, decisions of the meetings are not adequately taken into consideration by teachers.

3.4 Findings Pertaining to the Fourth Sub-Problem

With the final sub-problem of the study steps, obtaining suggestions for the improvement of current CoT meetings were aimed. Three items have been included in the measurement instrument for this purpose. The said items have been presented in Table 5.

Table 5: Suggestions of teachers for the development of current meetings of committees

	Completely Disagree		Disagree		Variable		Agree		Completely Agree	
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
Regional committees of teachers should be determined according to school types.	64	4	46	3	138	9	681	44	620	40
A meeting calendar should be formed at the beginning of the year.	107	7	137	9	201	13	578	37	526	34
The time allocated for meetings should be increased.	592	38	465	30	154	10	216	14	122	8
	1549						100			

When responses of participating teachers were examined, it can be observed that an 84% majority of teachers believe that meetings held outside of the institution should be organized considering school types, and 71% believe that a calendar should be formed at the beginning of the academic year for meetings to be held. Furthermore, it can be observed that teachers considered the time allocated for CoT meetings to be adequate rejected the suggestion of increasing the allocated time with a majority of 68%.

4. Conclusion and Recommendations

When findings of the study are discussed with a holistic approach, it was concluded that CoT meetings are conducted actively across the province by virtue of the relevant regulation, however, the meetings being conducted with a problem-oriented structure are among the primary reasons decreasing efficiency. Findings of the study conducted by Albez, Sezer, Akan, and Ada (2014) support this finding. It can be observed that according to teachers participating in the study CoT is conducted generally in an effective manner.

According to another result, participating teachers have expressed the failure of meeting results to be taken into consideration by relevant units and some deficiencies in the educational process as basic reasons preventing decisions in CoT meetings being applied in educational processes. When the study conducted by Küçük, Ayvaci, and Altıntaş (2004) is examined, it can be observed that they have reached a similar conclusion and teachers in this study believed that most decisions made at CoT meetings were not put into practice.

Based on this data of the study, it can be observed that CoT meetings conducted at schools require a series of measures when being put into practice. It is stipulated that the following list of recommendations can contribute to the enhancement of the effectiveness of CoT meetings at schools.

- Meetings can be conducted according to school type,
- Participation of experts and stakeholders in the meetings can be ensured,
- Meetings on a school basis can be made periodical,
- Good practice examples can be presented at meetings,
- Opinions obtained as a result of CoT meetings can be forwarded to concerned units, and teachers can be provided necessary feedback.

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An examination of assertiveness and aggression level of amateur soccer players in different age groups

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Abstract

The aim of present study was to determine assertiveness and aggression level of soccer players in different age groups. Participants were 150 amateur soccer players between ages of 14 to 30 years. Assertiveness and aggression level of participants were measured by Aggression Inventory which was developed by Kiper (1984). Three dimensions and 30 items (10 items per subscale) comprised the inventory. Subscales of the inventory are called as destructive aggression, assertiveness and passive aggression. Inventory was administered players in three different categories of amateur soccer league in Antalya (Junior, Youth and Senior).

Results of statistical analyses revealed that in destructive aggression there were significant differences between senior groups and both junior and youth groups ($p < .05$). Senior groups had the highest score in destructive aggression. In passive aggression subscale scores, the senior soccer players significantly had lower score than both junior and youth groups ($p < .05$). There was no significant differences between youth and junior soccer players ($p > .05$). An examination of assertiveness subscale showed that there were significant differences between age groups. Follow-up test revealed that junior soccer had significantly lower assertiveness score than both youth and senior players. There was no significant difference between youth and senior soccer player in assertiveness scores.

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Peer-review under responsibility of the Sakarya University.

Keywords: Aggression, soccer, assertiveness, junior, youth and senior

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Introduction

Aggressiveness is a behavior that athletes mostly encounter in sports environments. Aggressiveness in general is defined as “an overt verbal or physical act that can psychologically or physically injure another person or oneself” (Husman & Silva, 1984).

There are two types’ aggressive behaviors. The first of these is hostile aggression and the other is instrumental aggression. Hostile aggression is an impulsive attitudes, and intent to damage a person psychologically or physically. In instrumental aggression, the main motive is to reach a certain goal. Damaging other people coincidentally occurs during the process of reaching the goals. In addition these aggressiveness types, there is one

more type of behavior is called assertiveness. Assertive behavior is defined as enhanced physical behavior including the use of optimal verbal or physical power and strategy in order to reach a goal (Gümüřdağ, Bastık, Yamaner, Kartal & Ünlü, 2013). A considerable amount of research has been done on assertiveness and assertive training (Furnham, 1979), with psychiatric patients, university students and athletes.

Assertiveness is an essential component for interpersonal skills, parents can encourage their children to be participate in sports to make them have this traits. There are studies recommending that engaging in sports and exercise contributes to some advantages such as the improvement of body, psychology and personality, better performance in team work, cooperation, self-esteem, self-efficacy, self-control, respect to the others and creating assertive individuals (Acet, Tazegül, Kocapınar, & Baş, 2012).

Team sports athletes display less mature moral reasoning and a tendency to taking a count aggression as more rightful than nonathletes. Athletes confirm aggression under circumstances, such as close games or retaliation. Many athletes accept a certain amount of aggression as part of the game, which raises the question about whether and what account selections players really make (Tractlet, Rascle, Souchon, Coulomb-Cabagno, Petrucci, & Ohbuchi, 2009). The aim of present study was to determine assertiveness and aggression level of soccer players in different age groups.

Material and Methods

.1. Participant

Participants were 150 amateur soccer players between ages of 14 to 30 years. The entire soccer player took part in different levels of Amateur League in Antalya. Fifty of soccer players were participates in junior level (age: $14.52 \pm .50$ years and training experience: 2.44 ± 1.31 year), other fifty participate in youth level (age: 17.30 ± 1.16 years and training experience: 4.02 ± 1.96 year) and last fifty soccer players were in senior level (age: 23.50 ± 3.18 years and training experience: 4.02 ± 1.96 year).

Assertiveness and aggression level of participants were measured by Aggression Inventory which was developed by Kiper (1984). Three dimensions and 30 items (10 items per subscale) comprised the inventory. Subscales of the inventory are called as destructive aggression, assertiveness and passive aggression. Inventory was administered players in three different categories of amateur soccer league in Antalya (Junior, Youth and Senior). Reliability of the scale was found as 0.80 and validity was found as 0.51.

Table 1. Subjects age and experiences (training age)

Categories (n=150)	Age (year)	Experience (year)
Junior (n=50)	$14.52 \pm .50$	2.44 ± 1.31
Youth (n=50)	17.0 ± 1.16	4.02 ± 1.96
Senior (n=50)	23.50 ± 3.18	10.82 ± 3.48

.2. Statistics

All data are presented as means (SD). In the first part of the statistical analysis, descriptive statistics (mean, standard deviation and Kolmogorov-Smirnov normality test) were computed. According to Kolmogorov-Smirnov normality test results all the variables were not normally distributed. For that reason, Kruskal Wallis test was used to compare the mean scores of three different categories of soccer player. Mann-Whitney-U test was used for follow-up test. All statistical procedures were performed in SPSS Version 10.0; the alpha level was set at .05.

Results

Result of Kiper Aggression Inventory subscales destructive aggression, passive aggression and assertiveness

scores of soccer players in different categories are presented in table 2.

Table 2. Comparison of Kiper Aggression Inventory subscales destructive aggression, passive aggression and assertiveness scores of soccer players.

	Junior Soccer Players (n=50)	Youth Soccer Players (n=50)	Senior Soccer Players (n=50)	
Destructive Aggression	31.84±9.16	32.24±7.34	22.54±8.61	$\chi^2=34,633$, $p<.001$
Passive Aggression	33.04±7.46	32.06±5.90	24.26±6.79	$\chi^2=38,567$, $p<.001$
Assertiveness	41.28±7.72	45.46±6.34	44.44±11.20	$\chi^2=9,810$, $p=.007$

As a result of Kruskal Wallis test, there were significant differences between different age group amateur soccer players in destructive aggression. Follow-up Mann Whitney-U test revealed that significant destructive aggression differences between seniors and both junior and youth ($p<.05$).

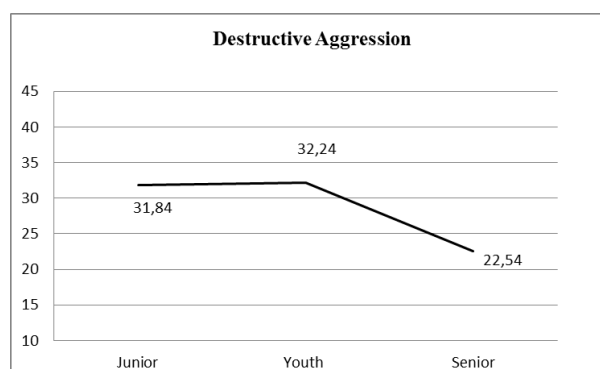


Figure 1. Destructive Aggression score of different age group amateur soccer players

Seniors had significantly lowest destructive aggression score than both youth and junior. There was no significant difference in destructive aggression score between youth and junior amateur soccer players ($p>.05$).

In passive aggression scores, there were significant differences between junior, youth and senior amateur soccer players. Follow-up test showed that senior soccer players had significantly lowest score in passive aggression than both junior and youth soccer players. There was no significant difference in passive aggression score of youth and juniors amateur soccer players ($p>.05$).

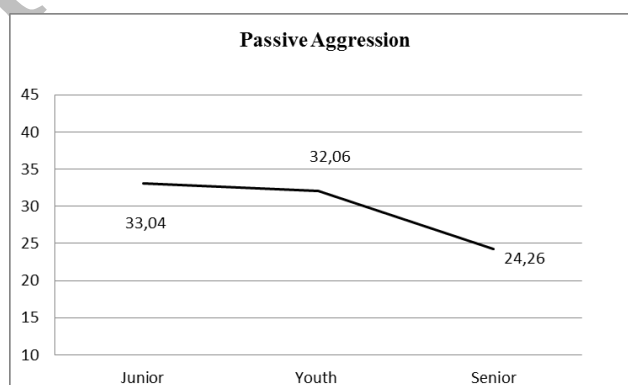


Figure 2. Passive Aggression score of different age group amateur soccer players

When examining assertiveness level of amateur soccer players, Kruskal Wallis test indicated significant age group differences.

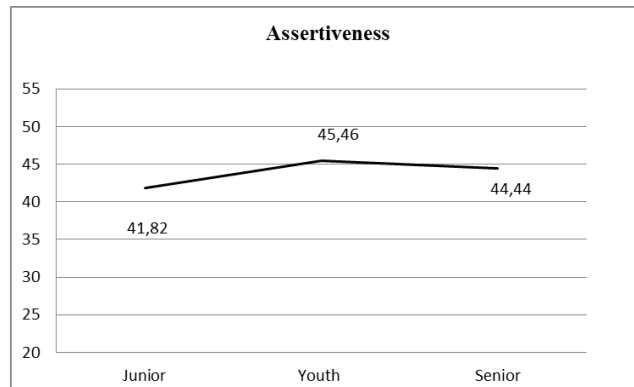


Figure 3. Assertiveness score of different age group amateur soccer players

After follow-up Mann Whitney-U test, significant differences obtained in assertiveness score between junior and both youth and seniors ($p > .05$). While junior amateur soccer player had the lowest assertiveness score, youth soccer players had the highest score. There was no significant difference in assertiveness score of youth and senior amateur soccer players ($p > .05$).

Discussion

In the literature aggression has divided three categories; destructive aggression, passive aggression and assertiveness. The destructive aggression is the equal of the hostile aggression. According to Kiper (1984), assertiveness is considered as positive aggression. The passive aggression means destroying his self-respect, social status, hurting jokes, gossiping, deporting in group and intentionally manipulating against others (Çetin, Gezer, Yıldız, & Yıldız, 2013). Since aggression is common all the world, it has been investigated more thoroughly and more frequently by means of various researches (Kurtyılmaz, 2013). The aim of present study was to determine assertiveness and aggression level of soccer players in different age groups.

In present study, aggression levels of amateur soccer players were examined by using Kiper Aggression Inventory. The results of these studies have generally suggested that destructive aggression of seniors had significantly lowest than both youth and junior. Youth and junior amateur soccer players had similar score in destructive aggression. With age destructive aggression levels tends to decrease.

In passive aggression scores, there were significant differences between junior, youth and senior amateur soccer players. Senior soccer players had significantly lowest score in passive aggression than both junior and youth soccer players. Youth and junior amateur soccer players had similar passive aggression score. With age passive aggression levels tends to decrease.

Assertiveness levels of junior amateur soccer players appear to be significantly lower than both youth and senior. Youth amateur soccer player had highest score in assertiveness. With age assertiveness tends to increase.

In his study Güner (2006) found that football players had destructive aggression mean; $X = 27,42$ and, passive aggression mean; $X = 22,00$ and assertiveness mean; $X = 36,52$. A research conducted by Topuz, Sanioğlu and Çağlayan (2010) demonstrated that football players scored $X = 35,94$ in destructive aggression, $X = 41,36$ in assertiveness, $X = 30,17$ in passive. In other research made by Tutkun, Güner, Ağaoğlu, and Soslu (2010) demonstrated that individuals playing team sports scored $X = 27,9$ in destructive aggression, $X = 32,3$ in

assertiveness, $X=23,8$ in passive aggression. Doğan et al (2002) informed that levels of disruptive aggression and assertiveness of those doing sports were significantly higher than those did not do sports. The present findings were similar to those of Güner (2006), Topuz, Sanioğlu and Çağlayan (2010), Tutkun, Güner, Ağaoğlu, and Soslu (2010).

Based on the findings of the present study, it can be concluded that while destructive and passive aggression score of amateur soccer players decrease with age, assertiveness level increase with age. It can be said that sport and training experience has positive effect on player's aggressive behaviors.

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An examination of the relationship between 9-12-month-old children's executive functions and social skills

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Abstract

This study is a descriptive study aiming to identify the relationship between 9-12-month-old children's executive function performances and their social skills. Adopting a survey method, this research study used the Wisconsin Card Sorting Test and Stroop Test-TBAG Form as well as the School Social Behavioral Scale and Personal Information Form as data collection instruments. The population of the study includes 131 9-12-year-old students continuing their education in the İstanbul province. The results of the study indicate that among executive functions, 9-12-year-old children's levels of perseverance and resistance to interfering effect vary depending on their gender and their levels of perseverance, conceptualization/reasoning, and resistance to interfering effect vary depending on the grade they are in.

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Peer-review under responsibility of the Sakarya University.

Keywords: executive functions; social skills; neuropsychological tests

1. Introduction

The cognitive system is not only a system enabling the hearing, perceiving, memorizing, learning and retrieving the learned stimuli when needed. Instead, an effective cognitive system should be able to protect schemes and sets, change and arrange them when necessary, recreate them, protect them from the interfering effects, integrate events based on time and space, scan the memory, work on its traces, set up strategies and change them, and finally make plans (Karakaş & Karakaş, 2000).

The dynamic and complicated nature of the information processing in the brain has led to the emergence of the concept of executive functions referred while describing the high-level cognitive processes. This concept embodies skills, such as self-regulation, the behavior sequence, flexibility, response inhibition, planning and the organization of behavior (Lezak, 1995; Borkowski & Burke 1996; Mercugliano, 1999). Additionally, other main executive functions are motivation, spontaneity, initiative ability, observance of social compliance, judgment, problem solving, ability to follow a multi-step direction and the ability to maintain the behavior output without falling into perseveration (Öktem, 2006). These functions pave the way for a person to think about him/herself and determine what will happen in the future and how these functions will affect him/her (Barkley, 1997; Mercugliano, 1999).

The term *executive functions* is a general term used to refer to all the processes, such as planning, attention, controlling impulse and incorrect responses, conducting organized research, initiating and performing an action, thinking and action flexibility (Hill, 2004; Anderson, 1998; Anderson, 2002). The development of the executive functions begins in the early childhood period, and it continues throughout the periods of adolescence and young adulthood as the prefrontal cortex develops. It is observed that as the executive functions regularly develop, children begin to deal with more complex tasks (e.g. driving motor vehicles, success at school) which require children to manage themselves. It is also indicated that children's executive functions have regulatory control on their thoughts and behaviors while they are solving a problem. It is stated that data regarding children's executive functions can be obtained by doing the following: observing their abilities to solve problems and to initiate games in their natural environment, evaluating how flexible children are when their routines change and collecting

information from parents about their children's inhibition capabilities (Baron & Fennel 2000; Blair, Zelazo & Greenberg, 2005).

On the other hand, based on cognitive and social abilities, the *social skill* is a term influenced by individual characteristics and environmental factors (Wyman et al., 2000); in addition, this term refers to the process of demonstrating appropriate goal-oriented behavior (Bacanli, 1999). Social skills can be described as skills of adapting to the social environment and using appropriate communication paths to cope with conflicts that may occur (Hilooğlu & Cenkseven, 2010). For the development of social skills, basic sensory/perceptual, cognitive and emotional structures are needed. The skills of socialization and realizing faces, emotions and what passes through someone else's mind are only a few examples of social skills contributing to the process of reasoning in the social context. Still, these skills are not sufficient for the emergence of socially appropriate behavior. In order to meet developmental goals required by the social context, it is also important for the child to be able to organize his/her social skills (Guralnick, 2005). Thus, it is essential that the child's skills of reasoning and ratiocinating should be well-developed, and this is directly related to executive functions. However, a limited number of studies have so far focused on the effect of executive functions on social skills. These studies are mostly related to the field of special education and have mainly dealt with the social communication disorders of the autistic children (McEvoy, Rogers & Pennington, 1993; Griffith, Pennington, Wehner & Rogers, 1999; Landry & Loveland, 1988), adaptation disorders (Gilotty, Kenworthy, Sirian, Black & Wagner, 2002; Kleinmans, Akshoomoff & Delis, 2005), developmental retardation (Kiley-Brabeck & Sobin, 2006; Anderson, Anderson, Northam, Jacobs & Mikiewicz, 2002) and social skills of children with behavioral problems (Clark, Prior & Kinsella, 2002; Huang-Pollock, Mikami, Pfiffner & McBurnett, 2009). On the other hand, there have been some other studies involving children passing through normal developmental processes. To illustrate, the development of executive functions after the age of 5 and during the period of puberty (Best, Miller & Jones, 2005; Anderson, Anderson, Northam, Jacobs & Catroppa, 2001; Brocki & Bohlin, 2004), the evaluation of executive functions and special cognition (Blakemore & Choudhury, 2006) and the investigation of executive functions and social-emotional development (Riggs, Jahromi, Razza, Dillworth-Bart & Mueller, 2006; Domitrovich, Cortes & Greenberg, 2007) are topics studied so far. In our country, relevant studies are mostly centered around executive functions of adults and the elders, and especially following 2000s, studies started to shift attention to children and adolescents (Öztürk, 2004; Çelik, 2004; Köksaldı Özgül, 2005; Soysal, 2007; Karateke, 2009; Yulaf, 2010; Etel, 2012; Sakarya, 2013; Sezgin, 2013). On the other hand, other studies focusing on different variables dealt with social skills of pre-school children (Yukay Yüksel, 2013; Pırtık, 2013; Tunçeli, 2012; Erten, 2012; Erler, 2011; Bilek, 2011) and individuals who did not yet reach the period of adulthood (Yukay, 2003; Bedir, 2013; Gezer, 2010; Kurt, 2010; Gülaçtı, 2009; Kara, 2000). However, no research study has so far been carried out dealing with the issues of executive functions and social skills at the same time.

Thus, the current study aims to investigate the executive functions of the children at concrete operational stage and formal operational stage (between the ages of 9 and 12) and to reveal the effects of these functions on social skills. Therefore, the following research questions have been formulated:

- Do the executive functions of 9-12-year-old children vary depending on the level of gender and grade?
- Do the social skills of 9-12-year-old children vary depending on the level of gender and grade?
- Is there a relationship between the executive functions and social skills of 9-12-year-old children and does this relationship vary based on the levels of gender and grade?

2. Method

2.1. Research Design: This is a descriptive research study aiming to identify the relationship between the executive function performances and the social skills of 9-12-year-old children. In the present research study in which a survey method was applied, the Wisconsin Card Sorting Test, Stroop Test-TBAG Form, School Social Behavioral Scale and Personal Information Form were used as data collection instruments.

2.2. Sample: The population of the present study intended to explore the relationship between executive functions and social skills includes 9-12-year-old children attending schools in the İstanbul Province. The sample of the study, on the other hand, includes 131 students attending six primary schools in the Kadıköy district of the İstanbul Province.

2.3. Data Collection Instruments:

2.3.1. Wisconsin Card Sorting Test (WCST): This neuropsychological test was first developed by Berg in 1948 and then reorganized by Heaton in 1981. WCST is an executive function test (Baddeley, 1990; Baddeley et al., 1986; Lezak, 1995). The test assesses concept formation, abstract scrutiny skills, working memory, attention, and perseverative tendency.

13 scores can be calculated from this test. These scores are as follows: the total number of errors (WCST2) and correct answers (WCST3), the total number of response (WCST1), the number of completed categories (WCST4), the number of perseverative response (WCST5), the number of perseverative error (WCST6), the number of error that is not perseverative (WCST7), perseverative error percentage (WCST8), the number of responses used for the completion of the first category (WCST9), the number of conceptual level response (WCST10), the conceptual level response percentage (WCST11), the score of failure to maintenance set scores (WCST12) and the score of learning how to learn (WCST13) (Karakaş, 2004).

The standardization study of the WCST for the Turkish culture was carried out within the BILNOT Battery (Karakaş, 2004). On the other hand, the standardization study of the WCST for Turkish children was done by Şahin-Aközel, Irak, Altınoğlu- Dikmeer, Erol and Akçakın (2006) who involved in their study 474 6-15-year-old children attending 1-8 grades (276 female, 198 male).

In this study, this test was used to assess participants' conceptualization/inquiry and perseverative tendency properties. The conceptualization/inquiry properties were assessed considering the Conceptual Level Response Percentage Scores (WCST11) while perseverative tendency properties were assessed using the Perseverative Error Percentage Scores (WCST8).

2.3.2. Stroop Test-TBAG Form: The Stroop Test was developed by Stroop in 1935 on the basis of an experiment. The main properties assessed by means of the Stroop Test are the skills of perceptual setup under the interference effect and changing the response. Other properties include information processing speed and attention (Karakaş, 2004).

The reliability study of the Stroop Test-TBAG Form was carried out by Karakaş and colleagues (1999) whose participants were 65 20-55-year-old people (32 female and 33 male). The test-retest correlation coefficients of the time scores of the five sub-tests ranged from 0,26 to 0,88 ($p < 0,05$). Kılıç and colleagues (2002) carried out the standardization study of the Stroop Test-TBAG Form for the healthy Turkish children between the ages of 6 and 11.

In the present study, the Stroop Test-TBAG Form was especially used to assess the skill of resisting to interfering effect. The property of resisting to interfering effect was assessed using the time score of the fifth Part of the Stroop Test.

2.3.3. School Social Behavioral Scales (SSBS): The School Social Behavioral Scale developed by Merrell in 1993 was translated into Turkish by Yüksel (2009).

School Social Behavior Scales enabling classroom teachers or other teachers at school to individually assess pre-school and primary school children was designed in line with the five-point Likert model. The scales are comprised of 65 items. The scale includes two forms: Form A: Social Competence and Form B: Anti Social Behavior. In the scale of "Social Competence", a total number of 32 items are available in three sub-scales that are "Interpersonal Relationship" (14 items), "Self-control Skill" (10 items) and "Academic Skills" (eight items). On the other hand, in the "Anti Social Behaviors" scale, there are 33 items in three sub-scales: "Assailant-Angry" (14 items), "Antisocial-Aggressive" (10 items) and "Destructive-Demanding" (9 items) (Yüksel 2009).

These scales aim to help teachers to rate students' behaviors in their academic and social environments by also considering their observations. Taking the theoretical background of the scales into consideration, it would be true to state that the scales can evaluate all the sub-areas dealt with under the term "social skills". The scales were designed in such a way that they can be used both as a whole and as separate sub-scales (Yüksel 2009).

3. Findings

3.1. Findings Related to the Executive Functions of 9-12-year-old Children:

Among the executive functions of 9-12-year-old children, their levels of perseveration and resistance to interfering effect vary depending on their genders. According to the t-test applied for this difference, the results are as follows:

- Among the executive functions, 9-12-year-old boys and girls' levels of perseverance are significantly different and this difference is in favor of boys [$t_{(129)}=2,19$ and $p<.05$].
- There is no difference in the 9-12-year-old boys and girls' levels of conceptualization/inquiry which are executive functions [$p>.05$].
- Among the executive functions, 9-12-year-old boys and girls' levels of resistance to interfering effect are significantly different considering the gender variable and this difference is in favor of girls [$t_{(129)}=2,11$ and $p<.05$].

It was also found that 9-12-year-old children's levels of perseverance, conceptualization/inquiry and resistance to interfering effect vary depending on the grade they are in. About this difference, the t-test results reveal 9-12-year-old children's levels of perseverance [$t(129)=2,06$ and $p<.05$], conceptualization/inquiry [$t(129)=2,18$ and $p<.05$] and their levels of resistance to interfering effect [$t(129)=4,72$ and $p<.001$] vary significantly depending on the grade they are in, and this difference is in favor of seventh graders

3.2. Findings Related to the Social Skills of 9-12-year-old Children:

It was found that 9-12-year-old children's levels of social competence, anti social behaviors and general social skills show variations depending on their gender variable. The t-test applied to justify this difference revealed that girls and boys' levels of social competence [$t_{(129)}=3,01$ and $p<.05$], exhibiting anti social behaviors [$t_{(129)}=2,28$ and $p<.05$] and exhibiting positive social behaviors [$t_{(129)}=2,37$ and $p<.05$] are significantly different, and this difference is in favor of girls.

Also, it was found that 9-12-year-old children's levels of social competence and general social skill vary depending on the grade these students are in, and the findings of the t-test are as follows:

- The social competence levels of fourth and seventh graders [$t_{(129)}=2,06$ and $p<.05$] and their levels of exhibiting positive social behaviors [$t_{(129)}=3,44$ and $p<.05$] are significantly different, and this difference is in favor of fourth graders.
- In the fourth and seventh graders' levels of exhibiting anti social behaviors, no significant difference is found [$p>.05$].

3.3. Findings Related to whether the Relationship between the Executive Function Skills and Social Skills of 9-12-year-old Children Varies Depending on the Gender and Grade Variable:

Table 1. The relationship between children's executive function skills and social skills of (N=131)

Dimension/Scale		Social Competence	Anti Social Behavior	SSBS Total Score
Perseveration	<i>r</i>	-0,082	-0,038	-,178*
	<i>p</i>	0,355	0,670	0,042
Conceptualization/inquiry	<i>r</i>	0,127	0,064	,284**
	<i>p</i>	0,148	0,469	0,001
Resistance to interfering effect	<i>r</i>	-,195*	,239**	0,007
	<i>p</i>	0,025	0,006	0,936

*Correlation (relationship) is significant at the level of $p<.05$.

** Correlation (relationship) is significant at the level of $p<.01$.

A negative significant relationship was found between children's levels of perseverance and their total scores in the SSBS ($r= -,178$ and $p<.05$). As children's levels of perseverance increased, their positive social behaviors decreased.

Besides, a positive significant relationship was found between the conceptualization/inquiry levels of the children and their total SSBS scores ($r=,284$ and $p<.01$). As their conceptualization/inquiry levels increased, their levels of positive social behaviors similarly increased.

Moreover, it was found that there is a negative significant relationship between children's scores of resistance to interfering effect and social competence scores ($r= -,195$ and $p<.05$). In other words, as their scores of resistance to interfering effect increased, their social competence levels decreased. On the other hand, a positive significant

relationship was found between children's resistance to interfering effect scores and their anti social behavior scores ($r=.239$ and $p<.01$). In other words, as the resistance to interfering effect scores of the children increased, their anti social behavior scores also increased.

The Fisher's Z test was applied in this study to be able to explore whether the relationship between the children's executive function skills and social skills varies depending on the grades they are in and their genders.

According to the results of the Fisher's Z test used to reveal whether the relationship between the executive function skills and social skills of the children varies depending on the gender variable revealed that the gender variable caused a significant difference only in the relationship between conceptualization/inquiry and anti social behavior [$Z_{\text{Girl*Boy}}=2.04>1.96$ and $p<.05$]. While negative relationship was found between the scores of girls in the conceptualization/inquiry dimension and their anti social behavior ($r_{\text{Girl}}=-.118$), this relationship was found to be positive for boys ($r_{\text{Boy}}=.247$).

On the other hand, according to the results of the Fisher's Z test applied to find out whether the relationship between the executive function skills and social skills of the children varies depending on the grade variable, the relationship between children's executive functions and their social skills does not vary for any of dimensions depending on the grade they are in.

4. Discussion

As a result of the statistical analysis of the data of the study, it was revealed that the executive functions of the 9-12-year-old children vary depending on their genders and grade levels. It was found that among executive functions, levels of perseveration and resistance to the interfering effects vary depending on the gender variable, and this difference is in favor of the female participants. Similarly, some studies evaluating the results of neuropsychological tests based on the gender variable yielded the finding that girls in the puberty period achieve more successful results than boys do (Yeniad, 2009; Soysal, 2007; Alpanda, 2010). This finding was justified by Ehlers and colleagues (2001) with the fact that the brain mutation of the girls is completed at an earlier stage (Şeneli, Gölgeci, Küçük, Süer & Özesmi, 2004). In their study entitled "The Standardization of the Turkish Form of Marking Test for the 6-11-year-old group of Children", Kılıç, Irak, Koçkar, Şener and Karakaş (2002b) found that the effect of gender is significant because 8 out of 56 parametric scores of the Marking Test were in favor of the girls. However, this effect does not show a regular pattern taking the four sub-tests into consideration. For this reason, they organized the data by combining the levels of gender in the normative data tables. Contrary to some studies proving that the gender does not have a significant effect on marking tests, there have been other studies demonstrating that the performance of the girls are better. However, it was thought by the researchers that the unsystematic result they found about the effect of gender cannot be generalized. In the same study, another important finding was that in parallel with the increase in age and grade, the systematic organization of screening increases. This situation caused a significant difference between 6-8 and 11-year-old children. In the study, the developmental effect in the systematic organization of screening is an indication of the rapid development of the stages of organizing the motor output occurring in the later stage of information processing and organizing the response for 7-11-year-old children.

The fact that 9-12-year-old children's executive function skills vary depending on the age and grade variables was also confirmed by a study carried out by Yalçın and Karakaş (2007). In their paper entitled "Qualitative and Quantitative Effects of Development In Wisconsin Card Sorting Test Performance", they found that in terms of WCST performance and executive functions, the WCST performance of children over and under 11 are significantly different from each other. Their results indicate that children under the age 11 make more mistakes and give fewer correct responses (Yalçın & Karakaş, 2007).

The findings of the present study showed that 9-12-year-old children's levels of social skills vary depending on the gender and grade variables. The findings when interpreted from the point of the gender variable revealed that girls and boy's levels of social competence, exhibiting anti social behavior and positive social behavior are significantly different, and this difference was found to be in favor of girls. When analyzed according to the grade level of the children, the difference showed that fourth graders exhibited more positive social behaviors, and the level of exhibiting anti social behaviors does not vary depending on the grade variable.

In Yukay Yüksel's (2013) study entitled "An investigation of social behaviors of primary school children in terms of their grade, learning disability and intelligence potential", it was found that there is no difference in the social competence levels of first, second and third primary school graders; nevertheless, third graders (9-year-old students) exhibit more anti social behaviors than first graders who are at the age of 7. Furthermore, it was revealed

that girls are socially more competent than boys, and boys exhibit more anti social behavior than girls. In many other research studies, girls were found to exhibit more social adaptive behavior than boys, and thus boys should be supported more about this issue (Güven et al, 2004; Gizir, 2002; Çimen, 2000; Marcon, 1993; Elliott, Barnard & Gresham, 1989). In contrast to these findings, in Morais and Rocha's (2000) study, it was concluded that the gender variable does not significantly affect the development of social competence.

Starting from the first days of the primary school, children rapidly socialize and adopt group rules. While girls prefer more calm and less action-based games in this period, boys may play more action-based and violent games. From the age of 9, friendship relations become more important (Kılıççı, 2006; Yavuzer, 2000); therefore, it would wise to think that 9-year-old children whose friendship relations have recently begun to develop are inclined to take these rules into account more seriously while structuring their social relations, and thus they might exhibit more social behavioral patterns than 12-year-old children currently entering the adolescence. This finding corroborates with the results of the study pertaining to the gender level. In some other studies, it was emphasized that as the level of age increases, children become more independent and may tend to exhibit anti social behaviors by ignoring the rules (Ruffalo & Elliott, 1997; Elliott, Barnard, & Gresham, 1989). It would be fair to suggest that as a result of raising children in line with the roles attributed to girls and boys as well as women and men in our society, the social skills of girls are more developed than boys because girls take more responsibility, have more social relations, cooperate and express their feelings more easily (Öztürk, 2006).

In the third research question of the current study, whether there is a relationship between the executive functions and social skills of 9-12-year-old children and whether this relationship varies depending on the levels of gender and grade are focused.

There is a negative significant relationship between perseveration and resistance to interfering effect levels of children and their total scores in the SSBS. It can be stated that as children's levels of perseveration and resistance to interfering effect increase, their positive social behaviors decrease. It was also found that there is a positive significant relationship between conceptualization/reasoning levels and their total scores in the SSBS. The more children's levels of conceptualization/reasoning increase, the more their positive social behavior levels rise. It was also revealed that there is a positive significant relationship between their scores of resistance to interfering effect and anti social behavior scores. Thus, as the scores of resistance to interfering effect increase, scores of anti social behavior also increase.

It was indicated that the relationship between children's executive functions and social skills varies depending on their genders, but this relationship does not vary depending on the grade they are in. It was also revealed that while there was a negative relationship between girls' conceptualization/reasoning and anti social behaviors, this relationship was positive for boys.

For effective social responses, individuals should have all the skills, such as social perception and problem solving as well as behavioral skills. Evaluating social cues in an effective way, making plans, suppressing improper ratings of different response options and deciding on the appropriate option are all among cognitive competences affecting social skills. Thus, cognitive processes are necessary for an effective social performance (Karakaş, 2004). In the literature, there have been no studies dealing with sample groups with normal psychologically healthy development to explore the relationship between executive functions and social skills. The reflections of executive dysfunctions on social skills have mostly focused in studies done with patients diagnosed with psychiatric disorders (Kılınçaslan, Motavalli Mukaddes, Sözen Küçükyazıcı & Gürvit, 2011; Cangöz & Selekler, 2003; Demir & Uluğ, 2002). In Topçuoğlu and colleagues' study (2009) whose participants are patients diagnosed with social phobia, it was found that the social phobia disrupts executive functions. It was also revealed that when compared to patients in the control group who are not diagnosed with social phobia, the ones diagnosed with this disorder have higher scores of mistakes in the Wisconsin Card Sorting Test. As a result, it was found that social anxiety has negative effect on WCST results. This result also supports the finding that as conceptualization/reasoning levels increase, the levels of positive social behavior also increase, and as scores of resistance to interfering effect increase, anti social behavior scores similarly increase.

According to other data obtained in this study, girls responded more positively than boys regarding executive functions and social skills. Thus, it would be fair to suggest that the more developed executive functions are, the more positive behaviors are exhibited; moreover, girls are more successful in exhibiting positive behaviors. However, considering the gender and age variables, carrying out studies involving children with normal development and investigating the effect of executive functions on social development and different developmental areas will pave the way for the emergence of different perspectives related to the field. In light of

the findings of the present study, it is advisable in the educational environment to attach importance to activities aiming to improve the prefrontal cortex, and thus the executive function in addition to supporting children's developmental areas starting from the pre-school period so that children can continue their lives in a more advantageous position.

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An integrated measure of student perceptions of feedback, engagement and school identification

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Abstract

Teacher feedback influences student learning, identity construction and trajectories. This study tests the measurement properties of a questionnaire designed to assess (a) student perceptions about teacher feedback; (b) student identification with school; and; (c) student engagement. 1089 students in grades 6 through 10 (mean age 13.4) participated in the study. Factor analyses yield dimensions of School Identification, Effective Feedback, Person-Centered Feedback, Engagement, and Social Acceptance. Internal consistency for principal dimensions varied between .77 and .89. The instrument is suitable for assessing student school identification, behavioral engagement, and perceptions of teacher feedback.

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Peer-review under responsibility of the Sakarya University.

Keywords: Teacher feedback, school identification, school engagement, school trajectories

Context

Educational research seeks explanations about the educational contexts manifested in student school trajectories. For example, it pursues evidence that will help (a) clarify why students dissociate from, or leave, school (Archambault, Janosz, Fallu, & Pagani, 2009; Freire, Carvalho, Freire, Azevedo, & Oliveira, 2009); (b) reveal how teacher practices influence student identity (Marzano, 2003; Carvalho, Freire, Conboy, Baptista, Freire, Azevedo, & Oliveira, 2011; Klapam & Flum, 2012); (c) describe the impact of academic retention on school trajectories (Conboy, 2011; Conboy, Moreira, Santos, & Fonseca, 2013); and (d) demonstrate the association between the nature of feedback from teachers and student involvement in school activities (Pollock, 2011, 2012). But such empirical evidence has typically emerged in the literature in isolation without a clear integration.

Consensus exists in the literature regarding the importance of the educational context in the process of developing student identity (Gee, 2000; Kaplan & Flum, 2012), reconstructing knowledge (Klassem, 2006) and facilitating the control and management of cognitive abilities (Rogoff, 1999). The accumulation of school-context experiences defines the student's academic career. This affords to student identity an essential dimension of temporality, since the construction of identity is characterized by a constant negotiation of meaning and experience that develops in a temporal context (Wenger, 2007). Thus, the construction of student identity is a continuous process, unfolding along the school career through processes of participation, reification, integration, exclusion and distinction (Abrantes, 2003; Freire et al., 2009; Kaplan & Flum, 2012).

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Student engagement in school emerges as one of the variables that influence the process of student identity construction. In general, student engagement includes cognitive, affective and behavioral components. In particular, the behavioral component of school engagement is reflected in student actions in the academic context, including typical practice and participation in school activities (Veiga, Galvão, Festas, & Taveira, 2012). Examples include, the completion of homework (Finn & Rock, 1997), showing up for classes and paying attention (Johnson, Crosnoe, & Elder, 2001), commitment to school work, getting good grades (Jordan & Nettles, 2000), participation in extra- curricular activities (Finn, 1993), and compliance with school rules (Fredericks, Blumenfeld, & Paris, 2004). Within the contexts of participation, student engagement is positively associated with school success and negatively associated with school leaving (Fredericks et al., 2004). Valente, Conboy and Carvalho (2009) suggest that engagement may not be a student trait, but rather a state that depends on the context of the discipline—whether it represents material that the student enjoys or not.

Teacher action also influences school trajectories. For example, the quality of the teacher-student relationship contributes both to the good atmosphere in the classroom (Wubbels & Levy, 1993) and to student engagement in learning (Schussler, 2009). The kinds of tasks proposed by the teacher, as well as teacher responses to student behavior, affect the contexts of participation (Marzano, 2003) and may contribute to the reification of positions (Carvalho et al. 2011). In carrying out school tasks and activities, feedback emerges as a fundamental factor in the teacher-student relationship (Black & Wiliam, 1998, Black, Harrison, Lee, Marshall, & Wiliam, 2002). Several studies show a clear impact of feedback on learning, performance, and self-regulated student learning (Kluger & DeNisi, 1996, 2004; Zimmerman & Schunk, 2001, 2007; Sendziuk, 2010). Good feedback must include information that the student can use. Each student must be able to understand the feedback's meaning in order to self-assess as to what has been accomplished and what is lacking in order to become more competent. In this sense, the main objective of the feedback should be to reduce the gap between student understanding and performance, on the one hand, and the educational objective, on the other (Hattie, 2009). According to the model developed by Hattie and Timperley (2007), the strategies used by teachers to reduce this discrepancy should start with the establishment of clearly defined challenges, and plans for the use of appropriate feedback, in order to help students achieve the intended educational goals. Valente et al. (2009) suggested that how feedback is perceived by students may again be context dependent.

According to Hattie (2009), many teachers claim to provide their students with abundant feedback. However, Valente et al. (2009) found that, instead of feedback being used to reduce the discrepancies between existing understanding and desired understanding, feedback was frequently used by teachers to accuse, judge and punish. This type of person-centered feedback is not effective in promoting learning and is demonstrative of how feedback can act as a double-edged sword (Kluger & DeNisi 1996).

The theory and empirical findings about feedback, identity/identification, and engagement and how these may impact school trajectories, such as retention and school leaving, have usually emerged in the literature in isolation from one another without the clear implication of their interrelated nature. In order to give proper emphasis to the integration of these constructs, there is need for a simple measure that would fill a gap and allow for, in a given sample, the simultaneous measurement of these variables.

Therefore, in order to study the relationships among these factors, we developed a measuring instrument, the Questionnaire on Feedback, Identification, and School Trajectories (QFITE). Originally developed in Portuguese, it is our intention with this paper to share the instrument with the English-speaking scientific educational community. The present study describes the construction and the metric properties of the various dimensions of the QFITE and serves as an early step in the process of validation of the instrument.

Method

1. Construction stages of QFITE

The QFITE was developed by a multidisciplinary group in Portugal that included educational and clinical psychologists, science educators, and sociologists (Carvalho et al., 2014) The goal was to build an instrument that

would allow study of the dynamics of the relations among (a) teacher feedback (as perceived by students); (b) student engagement (as perceived by students); (c) student identification with school, and; (d) school trajectories.

The first version of the QFITE included items targeting the theoretical dimensions of School Identification, Future Trajectories, Feedback and Engagement. The items were presented as statements to which students responded on a four-point scale. The selection of items was based on prior research (e.g. Handelsman, Briggs, Sullivan, & Towler 2005; Hattie, 2009; Valente et al., 2009). In the present study, the term school *identification* is used, and not identity. Some ideas identified by Martin et al. (2013) were used for this purpose, since both constructs have components in common.

Concerns for content validity of the scale (Haynes, Richard & Kubany, 1995) focused on the design and ordering of items, and the response scheme. As regards the preparation of the items, there was particular care to avoid: (a) terms that might influence or induce responses; (b) ambiguous terms; (c) double formulation questions; (d) technical language; (e) unbalanced alternative answers. Items were ordered in order to ensure that the sequence of items did not influence responses to following items (Tavares, 2007).

The original version of the QFITE was subjected to a pilot study with students in the greater Lisbon area who attended the 6th, 7th and 10th grades. The realization of this pilot study sought to obtain feedback from students regarding the existence of problems in the interpretation of items. Based on the results of this pilot study, four items were excluded from the QFITE.

.2. Final version of QFITE

The first substantive section of the instrument (21 items) intended to measure students' school identification (for example, "I identify with the school I attend" and "At school I feel alone") and expected school trajectories ("I am going to finish secondary school" and "I do not care about grades, as long as I pass the year"). The four-point response scale was anchored semantically (Completely agree = 3, Disagree = 0).

The second section included ten items focusing on behavioral engagement. In this section, students respond to statements (for example, "I do the homework" or "I ask questions when I do not understand the material") and rate to what extent each describes their reality as students. Two columns of response allowed each of these items to be answered under two different conditions. The instructions indicated, "Think of a *subject that you like* and respond in the left column," and "Think of a *subject you do not like* and responds in the right column." Responses were recorded on a four-point scale (Always = 3; Never = 0).

The third section was composed of 14 items that assessed student perception of teacher feedback (for example, "The forms of assessment in the discipline are presented clearly" or "The teacher comments show a lack of respect for students"). Each item was answered under the two conditions (thinking of a discipline *liked* and one *not liked*) on a scale anchored again as Always = 3 and Never = 0.

The instrument also included a demographic section (gender, age, nationality and year of schooling); a section relating to students' academic careers—trajectories (for instance, past retention levels and future goals) and their socio-economic and cultural status. Additionally there was a section with two open-response questions in which students were invited to indicate what kind of teacher comments that they appreciated, and those they did not like to hear, when teachers evaluated their work.

.3. Sampling and Participants

The target population of this study consisted of students from middle school and early secondary education who attended the transition years between study cycles. The sample consisted of students attending the 6th, 7th, 9th and 10th grades, and was selected through a probabilistic, multi-stage sampling procedure in continental Portugal.

The final sample consisted of 1089 students in 6th grade (25.7%), 7th grade (31.7%), 9th grade (26.6%) and 10th grade (16.0%) spread over 45 public schools in continental Portugal. The ages in the sample range from 10

to 25 years ($M = 13.4$, $SD = 1.7$); 41.4 % are aged between 10 and 12 years; 46.8 % between 13 and 15 years, and; 11.8% are older than 15 years of age. The vast majority of the students (95.9 %) are of Portuguese nationality, and 52 % are female.

.4. Procedures

Following ministerial authorization to conduct the study, schools were contacted by telephone (preferably) or via email. In cases where there was no response, contacts were repeated. In the case of school refusal to participate, or when no response was attainable, the replacement of the school was carried out through a new random stratified selection. Student participation was subject to authorization by parents/guardians. General instructions informed students about the study objectives, requested their voluntary participation, and guaranteed the confidentiality of their answers. For statistical analyses we used SPSS 22.0 for Windows.

Results

.1. First stage of analysis

As a first step, all semantically inverted items were recoded so that greater response values would always indicate higher levels of the measured construct. Individual item distributions were then analyzed in search of any anomalies. The data were then subjected to a principal components analysis (PCA) with the varimax rotation and using the Kaiser termination criterion. The examination of scree plots led us to select a solution that allowed for the extraction of six dimensions, which together explained 41,3 % of the variance of the results.

A general appreciation of the PCA results indicated that the first emerging dimension was consistent with the theoretical dimension related to teacher feedback, but only for the discipline that the student did not like. Feedback in the discipline that the student liked emerged as the third dimension. The fifth emergent dimension also presented aspects related to teacher feedback. However, while the first two dimensions of Feedback emphasize what is recognized in the literature as characteristics of effective feedback, the fifth additional dimension emphasized aspects person-centered Feedback, considered less effective, even counter-productive.

The second dimension that appeared in the PCA was associated with the perception of behavioral engagement of the student. However it did not distinguish between items for the discipline that the student liked and items relating to the discipline disliked.

Regarding the fourth PCA dimension, associated with school identification, the contents of the 14 items listed seemed to suggest the existence of possible hidden theoretical subdimensions.

Finally there was a sixth empirical dimension that emerged and was not foreseen in the theoretical design. This scale consisted of five items that referred to issues of acceptance and social integration in school.

At this stage of the analysis, therefore, a series of decisions were made. It was decided first to remove and items with a loading factor value $< .3$. I was also decided to maintain the theoretical division between engagement in the discipline liked and not liked. Finally it was decided to carry out an additional PCA on the set of 14 items that composed the fourth dimension (school identification) in order to clarify the existence, or not, of potentially useful subdimensions.

.2. Second phase of analysis

Table 1 presents the composition and characteristics of the final QFITE dimensions of School Identification and Social Acceptance. Following the recommendation of Sijtsma (2009), in addition to reporting the value of coefficient alpha, we also report the value of lambda-2.

Table 1. QFITE Dimensions, Internal Consistency Coefficients and Corrected Item-Total Correlations

Dimension	Item	r^a	α^b	λ_2^c
Total	I identify with the school I attend (PF)	.35	.82	.83
School	I like the teachers in my school (PF)	.42		
Identification	I only go to school because I have to (CW)*	.37		
	My teachers never considered me a good student (CW)*	.40		
	My skills make me be confident about my future (CW)	.51		
	I have the abilities necessary to enter university (CW)	.46		
	What I learn in school will be useful for my future (U)	.60		
	The grades I have in school determine my future (U)	.56		
	I am going to finish secondary school (U)	.38		
	At school I've had opportunities to discover that I can do new things (PF)	.39		
	My future depends on what I do at school (U)	.51		
	I do not care about grades, as long as I pass the year (CW)*	.32		
	For me, getting good grades is a guarantee of a good future (U)	.50		
	For me, going to school is an enriching experience (PF)	.56		
Social	I am happy in this school	.26	.51	.51
Acceptance	At school my classmates make fun of me *	.31		
	I make friends easily at school	.29		
	At school I feel alone *	.33		
	When I participate in group discussions , I feel that my opinion is valued	.23		

Note. Three subscales of Identification emerged: Utilitarian (U). $\alpha = .75$; Capacity and Will (CW). $\alpha = .64$; Personal Fulfilment (PF). $\alpha = .61$.

Items with inverted coding are indicated by an asterisk (*).

^a r – Item-total corrected correlation. ^b α – Cronbach's α . ^c λ_2 – Guttman's λ_2 .

Table 2. QFITE Dimensions. Internal Consistency Coefficients and Corrected Item-Total Correlations by Discipline Liked and Not Liked

Dimension	Item	Liked Discipline			Discipline not Liked		
		r^a	α^b	λ_2^c	r^a	α^b	λ_2^c
Effective Feedback	The teacher explains what we are expected to learn in the discipline	.56	.81	.82	.65	.89	.89
	The forms of assessment in the discipline are presented clearly	.55			.66		
	The teacher makes specific comments to help us to do work that we are doing	.62			.72		
	The teacher gives us opportunities to improve our work / grades	.49			.65		
	Grades are communicated and explained to each student	.46			.63		
	Different forms of assessment (not only written tests) are used	.31			.47		
	When we do an assignment, the teacher clearly describes what is not right and makes suggestions to improve	.58			.69		
	The teacher asks questions that help us to reflect on the quality of our work	.54			.68		
	The tone of voice and facial expression of the teacher show a belief that we can do better	.59			.63		
Person-Centered Feedback	When communicating grades, the teacher makes nasty comments	.58	.77	.77	.57	.77	.77
	The teacher says more about the way we are than about the quality of our work	.53			.56		
	The teacher comments show a lack of respect for students	.64			.62		
	The teacher says to do better, but does not say how	.52			.53		
Behavioral Engagement	I ask questions when I do not understand the material	.41	.77	.77	.55	.84	.84
	I do the homework	.49			.60		
	I go to school willingly	.47			.52		
	I take notes while in class	.39			.54		
	I work to understand the material, even when it is difficult	.58			.69		
	I pay attention in class	.57			.65		
	I study the material given in class	.57			.66		

Note. Items with inverted coding are indicated by an asterisk (*).

^a r – Item-total corrected correlation. ^b α – Cronbach's α . ^c λ_2 – Guttman's λ_2 .

The first dimension was termed Total School Identification (TSI; $\alpha = .82$). These 14 items were subjected to an additional PCA that revealed three subdimensions of School Identification: (a) Utilitarian Identification (U, five items, $\alpha = .75$); (b) Capacity and Will (CW, five items, $\alpha = .64$), and; (c) Personal Fulfillment (PF, four items, $\alpha = .61$).

The dimension of Social Acceptance (SA, five items, $\alpha = .51$) emerged unexpectedly from the PCA. Though its internal consistency is weak, we include it here for its eventual research interest.

Table 2 presents composition and characteristics of the feedback and engagement dimension of the QFITE. The size on the perception of students on teacher feedback was considered as consisting of four factors : (a) Effective Feedback in a discipline liked (EF_L , nine items, $\alpha = .81$); (b) Effective Feedback in a discipline not liked

(EF_{NL}, nine items, $\alpha = .89$); (c) Person Centered Feedback in a discipline liked (PF_L, four items, $\alpha = .77$), and; (d) Person Centered Feedback in a discipline not liked (PF_{NL}, four items, $\alpha = .77$).

Student self-perception about their behavioral engagement in school is measured by the QFITE in two dimensions (a) Engagement in a discipline liked (E_L, seven items, $\alpha = .77$), and; (b) Engagement in a discipline not liked (E_{NL}, seven items, $\alpha = .84$).

4. Conclusions

Empirical evidence about the roles of engagement, teacher feedback and school identification on school trajectories have typically emerged in the literature in isolation from one another and without any clear integration. While the intersecting influence of these factors may be apparent, it has often been impractical to include them all in a single study.

This article described the metric qualities of the dimensions of the QFITE as a first step in allowing the simultaneous study of these factors and their impact on school trajectories. The dissemination of the instrument will aid in its eventual validation.

The QFITE shows good sensitivity in its power of discrimination among subjects. It also displays good levels of reliability, with seven major scales yielding internal consistency values greater than $\alpha = .75$. Three subscales of the construct School Identification, while manifesting lower levels of internal consistency, may be useful for research purposes. Finally, an unforeseen dimension of Social Acceptance will require further development in order to be useful. Using the Spearman-Brown prophecy formula, we can estimate that about 12 additional parallel items (16 total) would be required to bring the scale up to acceptable levels of reliability.

The QFITE was constructed theoretically and tested empirically. Despite its good metric characteristics, it is recommended that future studies make use of other techniques to analyze its convergent, divergent, and predictive validity. It is important to develop new research that will allow the confirmation of the results here reported and, the continuation of the process of validation of the instrument. The QFITE is expected to be an asset in the study of the dynamics and consequences of the relationships among teacher feedback, student engagement, school identification, and educational trajectories.

Acknowledgements

This research was supported by the Portuguese Foundation for Science and Technology (contract PTDC/CPE-PEC/121238/2010) and the Unit for Research and Development in Education and Training of the Institute of Education, University of Lisbon.

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An integrated system of training engineers for aerospace industry in Siberia using innovative technology of the student project-and-team work

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Abstract

The implementation of the project-and-team education technology in the educational process at realization of a unique project to develop and create a series of student research and educational small spacecraft are discussed. Innovative learning technology developed at the Siberian State Aerospace University in cooperation with strategic partners of JSC "Information Satellite Systems" named after academician M.F. Reshetnev" (JSC "ISS") and Krasnoyarsk Scientific Center of Siberian Branch of the Russian Academy of Sciences (KSC SB RAS). Typically, 36 students of the 3d, 4th and 5th years of study take part in the project simultaneously. When passing to the following year of study the student becomes tutor for younger student of the same direction sharing its experience with him. The final result of student's scientific works followed by the graduation project on its direction is the development and manufacturing of a real satellite device or element which will be mounted on-board the satellite and launched in space.

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Peer-review under responsibility of the Sakarya University.

Keywords: educational technology, student project-and-team work, students' small satellite

Main text

An integrated system of training engineers for the aerospace industry in Siberia using innovative technology of the project-and-team education is actively developing in the Siberian State Aerospace University named after academician MF Reshetnev (SibSAU) under the implementation of a unique project to develop and create a series of student research and educational small spacecraft.

The SibSAU is one of the leading Russian Universities in the aerospace technologies domain. The University develops on principles of the research university and implements the integrated system of preparation of specialists and scientific brainpower for the enterprises of space domain. Training programs for engineers include educational process, scientific research and industrial practice of students at the leading Russian space enterprises. SibSAU implements the innovation educational programs and performs scientific researches in close cooperation with the strategic partners – the base enterprise JSC "ISS" and the scientific institution KSC SB RAS, which have cooperatively created the sub departments, scientific and educational laboratories and research centers.

The JSC "ISS" is one of the leading enterprises of Russian space industry which possesses the technologies of complete space complexes creation cycle starting by the design to the spacecraft control in all types of orbit – from low circular to geostationary. During its activities the enterprise has taken part in implementation of more than 30 Russian and international space programs in the domains of communication, retransmission, television, navigation, geodesy and scientific researches. The enterprise has designed, manufactured and launched about 1200 spacecraft of 50 different types which distinguish by the high reliability and are intended for operation in low circular, circular, high-elliptical and geostationary orbits.

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The objectives and tasks of the program for creation of the scientific and educational, technological microsattellites series being implemented:

- development of the integrated system of the engineering education (distance learning system, laboratory sessions performing using the ground stations of microsattellites control etc.);
- implementation of the design-oriented educational technology during formation of the space domain specialists professional capacities (students' participation in designing and manufacturing of satellites, service systems and scientific devices);
- scientific experiments in space (development of the Earth natural resources space monitoring methods, multifunctional nanomaterials, high-temperature superconductors and other intelligent materials use in space);
- technological development and obtaining of the flight qualification for the advanced service systems, devices and elements of the satellites (of the attitude determination and control subsystem, electric power subsystem, thermal control subsystem and other subsystems with the increased lifetime).

An innovative activity of the University in the rocket and space component is based on three major priority areas of:

- Space information systems;
- Closed habitable space systems;
- Production rocket and space technology.

The basic principle of the organization of scientific and educational activities of the university and the training of engineers is to work closely with academic institutions of the Russian Academy of Sciences (RAS) and the base space enterprises. A special place in this activity occupy jointly created with base enterprises and institutions of RAS The Scientific and Educational Centers (SEC): Institute of Space and high technologies; Space systems and technology; Closed space systems and Rocket and space technologies developed by category of basic scientific directions of the University (Kovalev & Loginov, 2011).

On the basis of SEC "Space systems and technology" a team of students, graduate students, young scientists and specialists of JSC "ISS" is working on creation a series of scientific and educational small satellites (Smallsat) and carrying out scientific and technological experiments in space (Fig. 1). SEC material base allows the assembly and testing of Smallsat mechanical systems, prototyping of electronic equipment, vacuum and climatic testing and research of spacecraft electronic equipment.

The development program to create a series of technological, scientific and educational small spacecraft was made possible after a joint decision of the University, the JSC "ISS", JSC "Krasnash" and Krasnoyarsk Scientific Center of organization development and manufacture of the Smallsat. It provided undergraduate and graduate students a unique opportunity to take part in the engineering, design and assembly of satellites, working out innovative solutions, creating elements of space systems and space experiments. The first small satellite "Yubileyniy" was launched in 2009. The spacecraft was manufactured by JSC "ISS" with the participation of SibSAU students.



Fig.1. Student participation in the assembly SibSAU small satellite " Yubileyniy"

Structurally the "Yubileyniy" satellite consists of the unpressurized instrumentation module formed by the hexagonal frame on which the solar array panels are mounted and by three transversal panels – upper, middle and lower. On-board equipment is accommodated in the instrumentation module as well as on the outer surface of the upper panel. On the upper panel which is directed towards the Earth during the satellite operation the attitude determination subsystem elements are located – magnetometer and transversal beams with balancers, receiving and transmitting antennas as well as the scientific equipment: three Earth sensors to receive the data on the Earth radiation in the infrared range of wave lengths and to research the space-time radiation of the Earth day-time and night-time atmosphere in the apparent spectral range.

On the middle panel the DOKA-B equipment is installed that includes on-board computer, receiving equipment operating in frequencies of 145 MHz, transmitting equipment operating in frequencies of 435 MHz and radionavigation on-board equipment. On the bottom there are located: magnetic-gravitational attitude determination system providing the satellite longitudinal axis orientation towards the Earth in nominal mode, navigational equipment antenna, experimental sun sensor and "Radek" equipment dedicated to check the efficiency of application of the nano-coatings developed in the SibSAU for radiation protection of satellites' electronic components. One of the purposes of the unified platform of this satellite developed in the JSC "ISS" is to create conditions to perform the educational and scientific and technical experiments in space. The telemetry data from the equipment are received, processed and stored in the SibSAU students' Satellite Control Center.

The small satellite "Yubileyniy" ensured the performance of research, experimental and educational tasks:

- the "Yubileyniy" satellite launch started the information program dedicated to the most important stages of the space exploration (speech messages, slides in SSTV format, simulation of signals of the first satellite);
- it created conditions for use of information from the small satellite by the leading Russian higher schools in teaching and educational objectives;
- carried out the scientific and technological experiments and provided the flight qualification of perspective equipment.

On the second small spacecraft "Mikhail Reshetnev"(MiR) launched in August 2012 are tested for five new university developments. The students of SibSAU have developed and manufactured: on-board computer, remote data interface unit, Earth remote sensing camera and laser corner reflector intended to measure the distance from the satellite to the Earth. The function of the devices is the working-out the new control unit and the digital line of the Earth remote sensing information transmission in space. The small satellite "MiR" is designed on the base platform of the "Yubileyniy" satellite with extended mass and power performances (Fig.2).

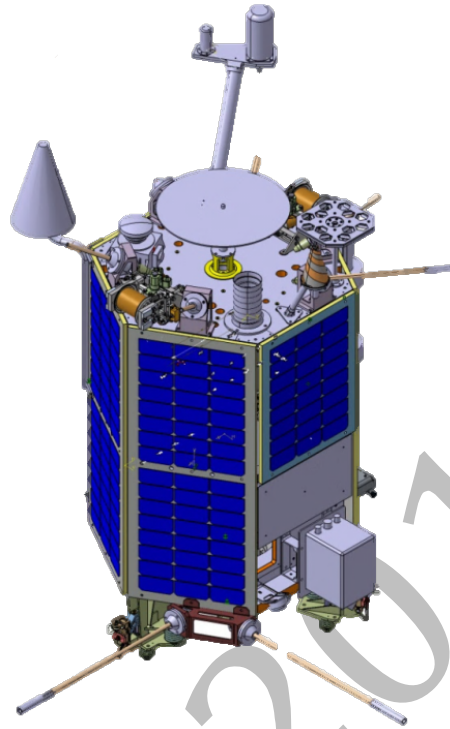


Fig. 2. Small satellite "MiR" launched in August 2012

All organizations that participated in the development and creation of the small satellite acquired significant technological advance for the future and contributed to the training of engineers for the space industry of Russia.

Besides the scientific-technical and experimental tasks the small satellites were intended to perform one more function not less important. The creation of these satellites allowed performing preparation of young specialists on the basis of project-oriented educational technology for the first time. The students took part in all stages of satellite creation: from the design documentation development to the satellite in-orbit control. The project implementation allowed determining the best students which have been working in labs with pleasure not only in time of studies but also in their free time. As the experience shows such students subsequently become the most qualified and responsible specialists.

Typically, 36 students of the 3d, 4th and 5th years of study take part in the project simultaneously having the following specialties: "Aircrafts control systems", "Rocket complexes and astronautics", "Geodesy and remote sensing" etc. including "Marketing" and "Management of high technologies". Each student performs research practice, has two research supervisors - one from the Siberian State Aerospace University, another of the leading specialists of JSC "Information Satellite Systems".

The project of the students' satellite creation is divided into 12 directions – according to number of the main satellite subsystems (thermal control subsystem, electric power subsystem, attitude determination and control subsystem etc). The 13th direction – is the development of the satellite payload equipment and performing the scientific and educational experiments in space. The scientific work of each student of the team refers to one of these directions. When passing to the following year of study the student becomes tutor for younger student of the same direction sharing its experience with him.

The final result of student's scientific works followed by the graduation project on its direction is the development and manufacturing, on the basis of the resource center, of real satellite device or element which will be mounted on-board the satellite and launched in space. The telemetry data from the student's device will be

further received in the SibSAU Satellite Control Center. After the defence of a graduation project the student is accepted for employment in the JSC “ISS”, in the department where its scientific adviser works, thus already having significant groundwork and experience of practical design. At the same time the graduating student enters the SibSAU postgraduate course.

The general diagram of the project-and-team preparation is presented in the Fig.3. For the project control the Internet-portal (www.smka.sibsau.ru) and the projects management system were developed that allow remotely coordinate the implementation of joint projects of different higher schools thus uniting students from different cities.

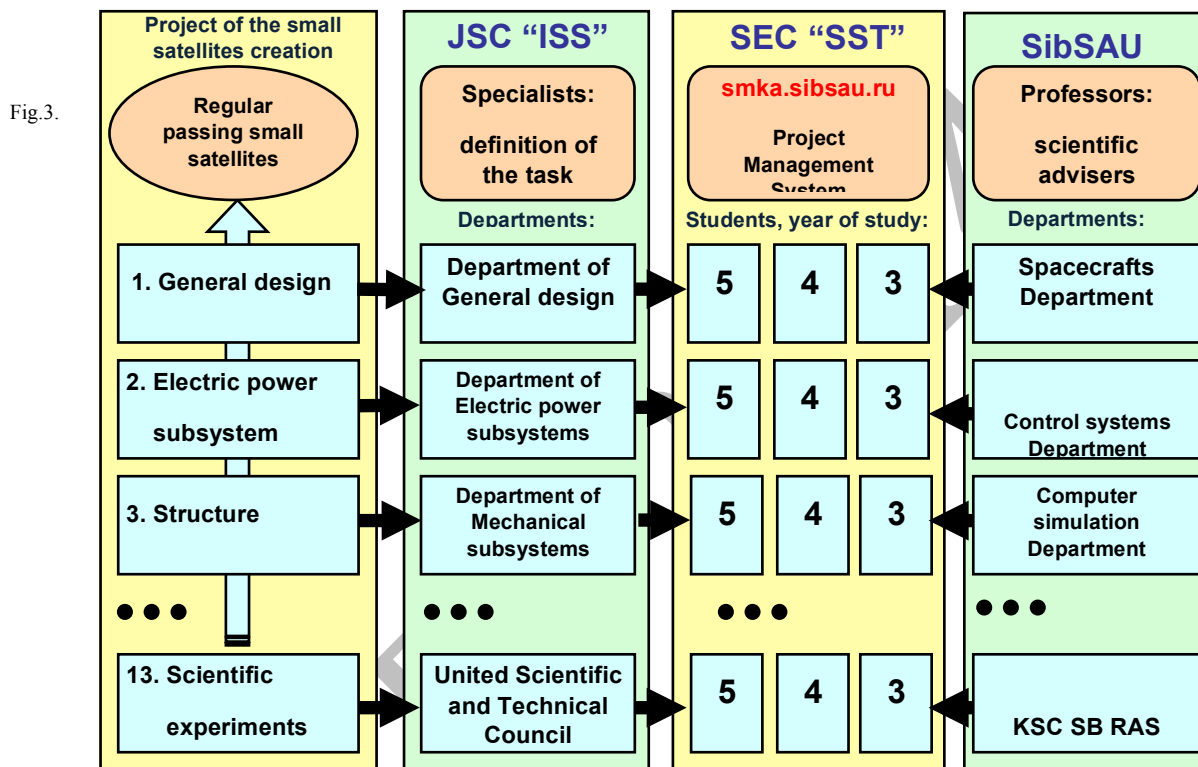


Diagram of the project-and-team preparation

The project-and-team education technology ensures the high quality of the specialists preparation and guarantees the competitive advantages of the graduating students in the labor market and their effective work in the enterprises of space industry and other high-technology manufacturing enterprises. As a rule, when completing studies the 90% of graduating students are employed according to the obtained specialization. The high level of preparation is confirmed by team and individual prize-winning places regularly obtained by the SibSAU students in all-Russian contests and competitions on different disciplines: theoretical mechanics, strength of materials, programming, computer graphics, management, information technologies security etc.

The operation control of the small satellites is performed by the Satellite Control Center (SCC) formed in the SibSAU. The students receive the telemetry information from the satellite in real-time mode there, learn to decode it and to control the satellite. The students' SCC is equipped with the transmitter-receiver hardware-software complex which allows performing the university's small satellites control in real-time mode, in automatic and manual modes. The students of technical specialties during studies have the unique possibility to directly control the Russian small satellites (YUBILEYNIY, MOZHAETS, CHIBIS and BAUMANETS-2) and satellites of the Technical University of Berlin (DLRSAT, TUBSAT), receive and process the telemetry information.

In the Center there are also studies on the program simulator of modern telecommunication satellite "Express-AM" that fully simulates operation of all satellite service subsystems and is used for test work-out of on-board control system and learning to operate the real satellite (joint development of SibSAU and JSC "ISS" specialists). The Students' SCC of the SibSAU is an important ground segment of the orbit group of technological, scientific and educational small satellites being created by the University and the partners.

In 2010 in the frame of the international project "Reformation of the educational programs in the field of space technology in Russia, Ukraine and Kazakhstan" (CRIST) according to the European Commission program TEMPUS the international distributed network of the University's small satellites control stations was created for the successful and full-scale small satellites control. This network included the Satellite Control Centers of the SibSAU, the Technical University of Berlin, the State Aerospace University of Samara, the Moscow Aviation University and several leading institutions of higher education of Russia, Ukraine and Kazakhstan. In 2011 in the frame of the project on the TEMPUS program the SCCs of the SibSAU and the Technical University of Berlin were remotely united through the Internet. Thus the students of SibSAU obtained the unique possibility to receive the information from the Russian University's satellites and satellites of the Technical University of Berlin.

To solve scientific problems of searching asteroids and spacecraft orbit determination at the University established the Center for Space Exploration, and has an observatory with two telescopes. On this basis, the learning process is organized for students of natural science and engineering specialties, observations and research in the field of astronomy in collaboration with the State Sternberg Astronomical Institute of Moscow State University and the Institute of Astronomy of the Russian Academy of Sciences.

The next three years approved jointly with JSC "ISS" program involving SibSAU to design and creation a satellite navigation grouping GLONASS-M and GLONASS-K, student's small satellite, a telecommunications satellite EXPRESS, low-orbit communication satellite GONETS, farm satellite COSMOS-CX and in the long term participation in the multi-purpose system "Arctic".

In the field of development and improvement of spacecraft components the University actively participates in the development and testing of advanced integrated on-board control system based on a "system on a chip", improving on-board power supply system of spacecraft and development of large satellite transformable constructions.

In the Scientific and Educational Center "Closed space systems" are trained scientists and engineers to develop the scientific and technological foundations for a new generation of life-support systems on the basis of a unique construction BIOS-3 created to simulate the mass transfer processes a high degree of isolation with respect to the stationary type space stations Moon, Mars, long space flights (Belyakov et al., 2009). Together with the Institute of Biophysics at the University organized a training process in scientific, technical and special subjects, organization of special workshops, perform research student papers and master's theses, training graduate students and engineers in life-support systems.

The most important element of the system adopted in the university training of engineers is to integrate the university with institutes of the Russian Academy of Sciences. The creation of SEC "Institute of Space and high technologies" allowed to the existing system of "factory - technical college" add learning system based on a combination of theoretical study and research work in the institutes of the Russian Academy of Sciences, which is reflected in the curricula of relevant specialties. As part of the SEC the students participate in the development of scientific bases of the technology of nanoheterostructures growing under high vacuum in order to create the new materials and the structures of solar cells.

In order to use the results of space activities for socio-economic development of the region at the University in 2013 established the Regional scientific and technological center of space services. The complexes of remote sensing data from space installed and functioning on the basis of SibSAU and Siberian Federal University. While receiving data can be carried out from an extensive list of spacecraft: Terra, Aqua, Suomi NPP, Spot-5, Spot-6, UK-DMC2, Formosat-2, Resource-DK1, Eros A, Eros B, Radarsat-1, Radarsat-2, Envisat-1, TerraSAR-X, TanDEM-X, Landsat-5, Landsat-7 and Meteor-M. In the field of Earth remote sensing, the university students, graduate students and staff participate in the development of methods to improve the accuracy characteristics of GLONASS / GPS, development of tools and methods for monitoring natural resources and remote sensing, as well as radar and radio thermal sensing from space.

The logical development work in the field of space activity results is yet another new direction in the University associated with entry of SibSAU into a major international project to create the International Global Monitoring Aerospace System (IGMASS). Currently, under the auspices of the International Academy of Astronautics started practical implementation of large-scale project of the International Global Monitoring Aerospace System - a system for effective and adequate forecasting of natural and man-made situations, through the integration of all available information on the monitoring of the ionosphere, atmosphere and lithosphere, as well as near-Earth space (Menshikov, 2010). The project aims to bring a new impetus to the international use of space - the transition from military confrontation to use the results of space activities for the benefit of all mankind. The participation of the University together with the enterprise JSC "ISS" as full members in this project and in the International Public Committee for the project IGMASS is highly relevant, including for the training of engineers.

Conclusion

Thus, the university established a successful integrated system of training engineers for the aerospace industry using the unique technologies of project-and-team students' work, balancing between innovations and traditions, education and scientific research and maintaining the flexibility in educational trajectory construction.

The specialty of the program on students' microsatellites series creation being implemented is that the JSC "ISS" uses them as an experimental platform for the development of new devices and systems. The most part of the payload on-board equipment mounted on these satellites is used for the first time. The new equipment gets the flight qualification in-orbit, after that it could be used in creation of big spacecrafts. The project-and-team education technology ensures the high quality training of engineers and guarantees the competitive advantages of the graduating students in the labor market and their effective work in the enterprises of space industry and other high-technology manufacturing enterprises.

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An interdisciplinary approach to texts as a model for a truthful approach to reality

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Abstract

This paper proposes how academic teaching based on the use of texts can be fertile soil for educational processes in younger generations. For this purpose, the work recommends grounding university courses that make extensive use of texts in an interdisciplinary approach. This suggestion results from didactic experiences with paintings and pieces of music analyzed as ‘texts’ in terms of communicative semiotic events and the interpretation of their meaning as a process of inference. By means of the proposed approach, university courses may become opportunities to educate students to faithfully approach reality as it is, within the broader experience of knowledge.

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Peer-review under responsibility of the Sakarya University.

Keywords: Education; Teaching; Interdisciplinary Approach; Texts as Communicative Semiotic Events.

Introduction

Currently, education tends to be related to the intense effort that adults are required to make in order to allow younger generations to grow in their identity and to learn how to face life’s challenges. According to this view, adults are the ‘custodians’ of knowledge, and should simply fill (the Latin verb is *instituo*, *imbuo*) empty containers, i.e. the minds of younger students. As a consequence, teaching becomes for many simply a disinterested transmission of knowledge, while the serious challenge of education turns into an ‘educational emergency’.

This paper reflects on education as something more than a disinterested effort. The reflection is based on the wider sense that the ancient Greeks gave to instruction, without separating it from its educational purposes, beginning from the three functions that are contained within all speeches (*docēre*, *delectāre*, *movēre*; cf. Cicero, 2001, II, 27; 28; 77). This viewpoint was highlighted last year in a questionnaire that a number of students of schools in Milan (Italy) were asked to complete. Their spontaneous comments were all related to the opportunities they look for in learning to be awakened as individuals and to become adults in facing life’s challenges.

The originality of the proposed viewpoint and the method used emerge from the didactic experience in university courses on German as a foreign language based on the analysis of “*intersemiotic* translations” (Jakobson, 1987, 429-430) of famous works of art (paintings, films or pieces of classical music). Both translations and works of art were considered as forms of ‘text’, i.e. as communicative semiotic events, whose meaning is understood through a process of inference.

The paper proposes the consideration of the arts as a potentially powerful factor in student education. The use of the arts in a didactic project to enhance student learning has always created a positive reaction in them, giving them the opportunity to make a twofold reflection: on the foreign language (its structure and style) and on themselves, especially on their mode of thinking and judging reality in comparison with the standpoint expressed by the authors of the analyzed texts.

Before an artist’s creation, people are implicitly invited to analyze it in order to infer its meaning through their identification with its content. This identification can be particularly fruitful when it succeeds in awakening the individual to his profound desires and requirements, by moving his free curiosity for life and his open attitude

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towards reality as a whole. The aim of this work is, therefore, to explore this identification in order to investigate the response of younger generations regarding works of art.

This contribution is grounded in the theory of contemporary linguists and literary scholars such as Calabrese (1985; 2006), Cattrysse (2000), Eco (1977), Jakobson (1987), C.S. Peirce (1931-1958), Pieretti (1983), and it begins with the teachings of the ancient Greeks, especially with Aristotle's idea of education as referred to Athens (Aristotle, 2013).

The teaching of the ancient Greeks

A focus on the concept of education by the ancient Greeks permits an in-depth analysis of this wide-ranging and delicate process. Beginning from its etymological sense, the verb "to educate" (It. *e-duco*, "bring out") signifies something more than a disinterested effort. It signifies helping a human being disclose his peculiar talents through learning activities. This implies helping him to set out to discover his identity by gaining an awareness of his relationship to himself and his environment, i.e. to other things and human beings.

Moreover, the main distinguishing feature that should be taken into account is the essence of man as a human being, which is the conception of his nature and identity both as an individual and as a member of a community. In addition, as man is the only living creature endowed with reason, he is also the only one able both to use language by formulating meaningful utterances as well as to understand them according to specific codes. Returning to its cultural roots, this concept corresponds, in Aristotle's philosophy, to the term *λόγος*, whose basic understanding has a threefold interpretation: "reason", "word", and "speech". As a consequence, education had for the Ancients a broad sense, as it should have nowadays in all societies.

In the eighth chapter of his work *Politics*, Aristotle indicates the character of youth education (*παιδεία*) and the way it should be imparted. The question was what should be taught and how, and the objective a man intended to pursue within this framework. As indicated by the Greek philosopher, any occupation, art or science should respect body, soul and mind, and it should make a free man (*ἐλεύθερος*) more fit for the practice and the exercise of virtue (gr. *ἀρετή*; It. *virtus*). As a consequence, only such kinds of knowledge that were "useful" (*χρησίμουν*) could be imparted to young children. At the same time, a man should do or learn anything for his own sake (or for the sake of his friends) with a view to excellence, otherwise any action would be thought menial and servile.

Education through academic teaching

In line with these aspects, this contribution develops from a crucial question, which is how academic teaching (and particularly teaching foreign languages) can be fertile soil for contemporary educational processes of younger generations.

Looking at the variety of technological opportunities that are in the hands of contemporary students, education has become a real challenge for teachers at all grades and levels of instruction. In many schools, new technological systems have been introduced alongside new experimental methods, according to which teachers have to make use of new hi-tech support in order to keep up with the times. The same is happening inside the university system where academic professors can develop their teaching methods in different ways. However, by teaching foreign languages through the arts, the challenge spreads even further afield, because the arts are not included in government programs and must therefore attract the attention of students by other means.

Education has always had a key role in leading younger generations into the challenges of life's difficulties. Yet, this process of building through the arts is something more than a general introduction or a preparatory phase in life. It is a primary way of living it, a way of taking possession of reality, because man learns how to confront situations only as soon as he starts to accept his own responsibilities (cf. Pieretti, 1983, 236). Moreover, as the first responsibility is honed during the learning years, the subjects taught at school and at university acquire even greater importance.

According to the spontaneous and anonymous comments by students of university courses in foreign languages

at the Catholic University of Milan, a very useful method of educating them in their approach to reality is the analysis and the practice of translations. As a matter of fact, every form of translation is a very productive activity and, at the same time, a worthwhile opportunity in improving the knowledge of the foreign language, as well as for personal development.

More specifically, if each text demands that it be approached and comprehended with the respect that it is due (cf. Pieretti, 1983, 236-237), the practice of *intersemiotic* translations induces students to a much more conscientious effort. On one hand, as in all other translations, it compels the students towards a mature analysis of the original text by paying attention to all its details, including its cultural and historical background. This allows students to be educated in observing works of art and welcoming them as they are, being open and receptive in the encounter with them until the students reach their proper and profound meaning. On the other hand, this kind of translation encourages students to develop the meaning using another code, and if this code is a foreign language, the earnest effort of reviewing the meaning becomes an occasion to reinforce one's own abilities in that foreign language.

As a consequence, education in the arts implies not only an education in aesthetic values, i.e. an education in beauty, but also in important human values related to personal development (Beauty, Goodness, and Truth, which every person feels attracted to), and this can enrich students in the awareness of their own identity (cf. Bergoglio, 2013).

As already stated, the didactic experience on which this contribution is based regards the practice on a Master's degree course in German as a foreign language. The practice was achieved through a series of exercises on both concepts of translation and text that were considered as communicative semiotic events. Thanks to the autonomy of the outlines of university courses, it was possible to ground the course in an interdisciplinary approach. By joining different modes of thinking and methods from different subject areas, this approach is currently emerging as a precious resource in modern teaching methods.

The value of an interdisciplinary approach

Since the very beginning of this didactic experience, it was clear that academic lessons on foreign languages should benefit from the same concept of comprehensive knowledge of the ancient Greeks. In this regard, interdisciplinary studies can lead in the right direction by extending, for example, both concepts of text and translation through closer collaboration with each other in the corresponding sciences.

According to the traditional concept in linguistics, for example, each text is part of a verbal communication and can therefore be considered as a *communicative* event. Furthermore, from the viewpoint of semiotics, not only is verbal communication made up of texts, but also each meaningful phenomenon can be considered a text in terms of a *sign* (cf. Peirce, IV.447; II.148). Therefore, dialogues or writings, as well as footprints, knocks on doors, or paintings and musical pieces are 'semiotic events' (cf. Eco, 1977), and this propels the analysis of texts into a much larger domain than linguistics alone. As a matter of fact, the combining of different scientific disciplines into the same activity (in this case, an *intersemiotic* translation) allows the 'creation' of something new by crossing traditional boundaries while analyzing the same text.

At the same time, the associated study experimented with certain specific theories in Translation Studies, such as the *polysystem theories of translation*. By describing translations/adaptations as phenomena that function as translations/adaptations in a specific time-space context, the *polysystem* approach has given rise to a considerable expansion of its object of study and consequently has also led to a re-definition of the concept of text. This has made possible the investigation of many phenomena inside a working field that covers all possible translational experiences (cf. Catrysse, 2000, 253-254).

In addition, the method proposed in this analysis also has its roots in the pedagogical approach called CLIL (*Content and Language Integrated Learning*), according to which teachers and professors make use of a foreign language as a vehicle, and not just as a learning tool, to teach their subject. This method is based on *cooperative learning* - students are asked to actively participate and cooperate with teacher and classmates through a series of oral questions, which they must argue during the lesson and through written exercises (cf. Coyle, Hood, & Marsh,

2010).

Education with the help of the arts

In the didactic experience at the foundation of this analysis, attention was drawn to “*intersemiotic translations*” as these give students the opportunity to experiment with innovative methods of learning a foreign language by analyzing and ‘re-writing’ different types of text.

A first example is the description of a painting in one’s own words. This means ‘decoding’ the original message of the text from its ‘iconic’ into a linguistic code. As a first step, students should be taught how to approach a text, i.e. how to be involved in a wide-ranging observation of it, by stating their personal interpretation only as a last resort in the entire analysis. Indeed, in their first reaction before a painting, people usually identify it with an image they already have in their minds, but this implies giving at once a personal interpretation, forgetting to observe the painting in the proper way. To let students persist with this sort of instinctive reaction means allowing them to be led astray towards an improper practice with each type of text and, consequently, with reality.

The way of ‘meeting’ a text offered on a university course should instead be an example of a truthful encounter with ‘something else’ that must be embraced as it is. Reality is a rich and complex soil, which requires that it be known with respect regarding all its aspects. Not surprisingly, the German philosopher Husserl spoke of reality as a “Givenness” (*Gegebenheit*), as something that the knowing subject did not create and which therefore has priority in the process of knowledge. The term expresses the quality or the state of ‘being given’. It indicates that things are given (*gegeben*) as contents, as gifts to the human mind, which can transform their manifestation into meaning and concepts. The term should therefore focus on the encounter between man and reality as it is, by teaching a fundamental attitude in approaching the realm of “phenomena”, i.e. as they are, as a given reality (Husserl, 1966; cf. Marion, 2005). Consequently, reality challenges man to approach it considering all its features, i.e. as it actually is, and not in relation to the expectations man may have.

One of the paintings proposed for the analysis was *Guernica* by Pablo Picasso (1937). This famous masterpiece permits students to come into contact with the process of “*intersemiotic translation*” from the dramatic facts that shook the Spanish painter into the vivid and metaphorical figures he realized.

The painting was analyzed in the following way. As the concept of text as ‘communicative event’ was the starting point, students had to infer its meaning through a proper analysis. Firstly, this was solicited through questions on the details of the iconic text, which helped the students to approach the entire meaning. They were then given a paper with a number of photos and a short description of the historical background, which gave them the opportunity to gain appropriate insight into the dramatic facts that gave birth to the painting and thus to deepen what was only superficially known. As a second step, the students received a sheet of paper with the images of the main sections into which the painting can be divided. With each image, there was a short caption including technical terms to be learned and used for homework. The descriptions were read and analyzed by the students together with the teacher. This permitted focus on style and technical terms, consideration of the details that surround each dramatic figure, and the realization that the depicted world is a metaphorical translation of the real one.

Only after these steps were carried out, students were ready to reflect on the content of Picasso’s painting by expressing their personal opinions. Thanks to a personal confrontation with the meaning of the painting and with the opinions of teacher and classmates, students could reflect on their own mode of thinking and judging. This important phase can lead to personal development, which has its origin in the interior change that the arts can ignite in the individual.

A second example concerns music. In a course on the analysis and the use of expressive techniques in the German language, Beethoven’s *9th Symphony* (1824) was analyzed in its final part, the “Ode to Joy” written by Friedrich Schiller and set to music by the German musician (the version offered to the students was taken from the concert on occasion of the 60th birthday of the Bundesrepublik Deutschland in front of the Brandenburger Tor). As for the painting by Picasso, the first step aimed at the observation of the work of art in its main details by leaving aside the personal interpretation as the final phase of the analysis.

Although according to Combarieu it is impossible to understand the meaning of music fully, nevertheless it is possible to try to give it an explanation, which should not be restrictively committed to a single science (Combarieu, 1980, 11; cf. Bellini, 2009, 45). The interdisciplinary approach acquired its proper importance also in this case. Students had to analyze the Ode in a twofold way. On one hand, they were invited to study the key terms in the text which conveyed the ideals that Schiller had intended to express. On the other hand, they had to focus on the way Beethoven had translated Schiller's ideals of humanity and brotherhood into his musical notes. As a second step, students were given two critical texts that expressed two different viewpoints on the hymn. Thanks to these texts, they could approach the content of the Symphony from different modes of thinking, thus becoming conscious also of the partiality of human judgments. Only as a final step could the students compare these viewpoints with their own opinions and personal interpretations of the analyzed text.

This aspect emphasizes how the use of the arts within a didactic project (at school or at university) can be linked to instructional and educational purposes. Although the analysis was not made by experts, students acquired a method of approaching a work of art they knew only superficially. Moreover, according to the comments received at the end of the course, it is clear that there is a confirmation of an important aspect of education: demonstrating to students a learning method with which they can approach a single text can be useful in showing them how to approach almost everything they want to know.

The majority of the comments regarded three main points. The first is the possibility that such a teaching method gives students the opportunity to both express their own attitude towards life and to compare their standpoint with those of authoritative commentators, especially those validated by a personal experience or based on a specific theoretico-historical background. At the same time, the interaction with teacher and classmates gave them the opportunity to extend their personal viewpoints and to develop their own interpretations in a thoughtful way.

A second edifying aspect refers to the mistakes that students inevitably make in the written homework they must do. The question is how students look at their mistakes. Nevertheless, the way they do this depends on the way their teachers or educators correct them and on the attitude they show towards them. If mistakes are seen as a sort of dishonor and are corrected automatically, students will never be able to appreciate education. However, if mistakes are recognized as an opportunity through which everyone can learn something about himself and consequently improve, everyone will be able to see mistakes as a barrier that demands that it be simply encountered and crossed. This concept allows, for example, younger generations to reach the awareness of their identity as human beings and as limited creatures that need to be corrected, for example, in being able to express their ideas in the best way. In addition, students are appreciative when they are taught how to improve.

The third aspect that education to the arts imposes on students is the link they are able to have with the past in terms of their cultural traditions. The course assisted them, for example, in becoming aware of part of the treasure that has developed throughout the centuries and which is now in their hands. However, as expressed by the German writer J.W. von Goethe in his masterpiece *Faust*, education should also teach how one's cultural heritage can become part of an adult's awareness. Goethe invites man to earn over again what he has inherited from his fathers, in order to own it outright. Yet, whatever is not used leaves man overburdened, because he cannot be aware of it or give a reason for it (Goethe 1986, vv. 682–684). It is also cultural enrichment that students are looking for, which can enable them to be integrated into the social community of which they are a part.

Concluding remarks

This analysis has offered a way of teaching a foreign language at school or at university through which students can achieve the edification of their selves.

Learners must be challenged. According to its etymological sense, this means that they must be “pro-voked” (lt. *pro- vocāre*), “called out” to answer to the stimulus of reality. Moreover, the first urgent stimuli of life usually emerge during the learning years. Only through the commitments they must fulfill, are students encouraged to a full responsibility, which is firstly experienced when they begin to answer the call of reality.

The usefulness of education is therefore strictly connected to the interest it can stimulate in learners. As a

consequence, education is firstly an adult problem, and then of the youth. In addition, as young boys and girls always develop a number of questions and requirements when they come into contact with everything, the question is whether adults have a path to offer them on which they can walk in search of the meaning of things, and hence of what they must study. What they actually need is valid educators who witness how life can be approached and who encourage them towards reality with the help of a method of approaching it correctly because, as soon as they find this opportunity, they begin their journey with enthusiasm and without the fear of further hard work. The additional care and effort required by homework assigned on the course and the way they interacted with it revealed, in fact, the thirst students have for new and interesting things that have something to communicate to them and with which they can come to terms with themselves.

University or school teaching will be of interest only if learners can be edified by it. What is in question is ‘the calling’ of young men and women, who demand to become adults thanks to a long-lasting awareness of their identity. In this regard, every educational process should imply an education in the arts, whose immense contribution consists of its power to “move” (It. *movēre*) and to change man’s soul, where he finds his longing for Beauty, Goodness, and Truth. Education in the arts is the best opportunity to develop a mature approach to life as it consists of a twofold phenomenon - social and personal. It is attention to life, because it is attention to the details of universal masterpieces, and this can facilitate the proper focus on reality as a whole. The analysis of a painting teaches, for example, how to turn one’s attention from the details to the whole. As stated by Benedict XVI, art is often “a proclamation of hope, an invitation to raise our gaze to the ultimate horizon”, and it fits to man’s thirst, because human history is “a continuing tension towards fullness” (Benedict XVI, 2009). It teaches the effort required to understand the meaning of things, by paying attention to different features under which the meaning is hidden. Moreover, the analysis of works of art encourages younger generations to meditate upon the values of past masterpieces by comparing them with their own values through fruitful discussions with educators and classmates.

In this way students can become active actors in what they study, protagonists of their work and consequently of their lives. Indeed, the most profound effect of the arts on human beings has always been the stirring up of the feelings and the mode of thinking by producing an interior change. This is the reason why the arts themselves can be considered an art, the supreme “art of education” (John Paul II, 1999). All personal reflections on texts and consequently on reality, which students would otherwise leave anonymous, emerge as a consequence of an invitation. Therefore, in line with the ancient Greeks, teaching cannot be just the disinterested transmission of knowledge, but it may become a gift that students can hold and use for a comparison with each type of reality (gr. *χρῆμα*).

Not surprisingly, youth has been called “a statue of grace” (Pieretti, 1983, 254), in which life stimulates curiosity and attracts the attention of youth. It is the first stage of life in which man begins the search for meaning and in which he can be educated in the investigation of the development of things as an analogue for the development of his life. It is obviously a compelling task, but it is truly fascinating, because younger generations need help in discovering the depth of life (cf. Pieretti 1983, 255). On this long path, they should first be exposed to these very educators.

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An interdisciplinary design study: Housing design through personality disorders

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Abstract

Design –concept- subject relation in this study was examined through personality disorders being one of the main fields of psychology. Identity, personality and character form a whole inseparable from human life. The issues such as “is it possible for such concepts related with life to come along with architecture” and “to affect the physical and lexical characteristics of product in designing process” are the questions to be answered. Thus, with the best definition, personality is the emotional, intellectual and behavioral characteristics of a person he / she show in daily life. Personality can be defined, described, suggested and it is stable. Personality disorder is, on the other hand, the situation seen when the personality features are enlarged and ruined the environmental compliance, caused a malfunction and personal disorder. Based on this general definition of personality and personality disorder, this basic question is asked: Is it possible to create an interdisciplinary design model through the concepts of psychology in design of an architectural product? Within this question, this study is conducted in Karadeniz Technical University, Department of Architecture, and Project - 4 Course. In the subject of project given to project group, the place is defined as “house” and the concept is given as “personality disorder”. Each of the students has chosen a different personality disorder and the house was designed in line with the main concepts of chosen personality disorder. Within this scope, the study consists of notional definitions of personality and personality disorders and the content and results of experimental design study conducted with project group. The aim of study is to investigate the chance to design product through the concepts of different disciplines, not through the concepts only belong to architecture in the process of architectural product.

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Peer-review under responsibility of the Sakarya University.

Keywords: interdisciplinary, architectural design, concept, personality disorder.

Introduction

At the present time, interdisciplinary transition that has tendency for changing design method and criteria by exercising influence over them transforms main events and concepts of architecture. Place, which is the main concept of the architecture, entered into re-definition period that occurred with interdisciplinary effects. In this study, a place design test was made over architecture and psychology disciplines. An interdisciplinary intellectual period is necessary so as to be able to evaluate design practices in design areas such as architecture with a critical criterion. This period enables that design concept or situation is re-examined within the period. Within this scope, in this study it was tried to concur psychology and architectural areas at the stage of design period of architectural product.

Determination Of Problem

Studies, which were performed on general psychology and architecture, are about how architecture/place affects or may affect human psychology. In other words, the effects of current places on human psychology are problem area. Psychology information field is secondary factor criteria during designing of place. In short,

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shaping method of the place is basically performed on individual. These questions are generally asked at this stage: what is effect of colors to be used in the place on people? How dimensions of the places affect people? How equipments to be used in the place make an impression on perceptions of people? Design is completely performed over person psychology. However, in this study two people were removed at the stage of designing the place. It was tried to design the place actually over psychology area.

Method Of The Study

This study, which discusses that the place can be firstly designed over psychology area without having any intermediary effect, was performed with 6 students within the scope of IV class of Architectural Project of 2nd class in the Department of Architecture of Karadeniz Technical University. At the first phase of the study, it was primarily decided to benefit from personality disorders that are basic field of the discipline and the personality disorders, about which study will be performed, were determined. Among the personality disorders,

- Capgras Personality Disorder,
- Antisocial Personality Disorder
- Bulimia Nervosa Personality Disorder
- Multiple Personality Disorder
- Borderline Personality Disorder and
- Apotemnophilia Personality Disorder were selected.

Each of determined personality disorders was selected by the students. The students firstly made theoretical researches about the personality disorders that they selected. As a result of the study that was performed, each student literally conceptualized the personality disorders that they selected.

At the second phase of the study, students researched residence subject that is defined place of project lesson.

At the third phase of the study, students designed residence over personality disorders that they conceptualized. Within this scope, main purpose of this project is to show applicability of a different design method by benefiting from different disciplines and information fields at the phase of architectural design. Giving main definitions of interdisciplinary permeability of the architecture that is theoretical background of the study in this direction and of personality disorders that were selected within the scope of study will place the study in a more solid ground.

4. Theoretical Background Of The Study: Relation Of The Architecture With Other Disciplines-Architecture And Psychology

A hybrid information and production area was formed for architectural structure and interaction was made with many different information fields. This hybrid structure was collected in one object until interaction period that started in the 18th century and was equipped with wide range of “architecture being competent for each work” (Balamir, 2000).

The architecture is a part of greater universe in the meaning of both production process and products that it gives as a part of social structure in which it is included, a reflection of economic and political system and as a projection of scientific and technical word. It obtains reasons and resources of its production from this great universe and puts its products into use of this universe. Thus, relation of the architecture with other structures that constitute this universe is inevitable. Inevitable relation in the production period is dominant and the architecture evaluates each data that it collected from different elements of the said universe in it and reflects to its product by accessing a synthesis (Gökbayrak, 2007).

With modernization period, the architecture also became an area of specialization thanks to corporate fragmentation of information types and disintegration of science-morals-art triangle of metaphysical world view towards the poles. The architecture, which faced with specialization tendency as other fields, redefined limits of

realm of existence. Since the architecture uses data belonging to human and natural world in its own information and production area as input, it continued its interaction with many information fields from disciplines belonging to human world such as philosophy and sociology to the disciplines for understanding natural world such as geography within its limits that were re-defined. Thus, the architecture provided its production with sub-disciplines specializing in itself such as landscape or city planning in both pre-modern and modernization period and also over the relation that it established with other autonomous disciplines (Gökbayrak, 2007). In this study, existence of a production was interrogated over relation that architectural information field and psychology field that is an autonomous discipline established.

Traditional design models were shaped in a way that the most important element in design of all environmental formations is human. Situation of an individual for being an important element causes that basis of design is formed and opinion of creating for human was based. When historical development period is examined according to Özel (2008), it is seen that each individual considers him/her as a starting point at all phases that were designed and realized to meet all individual and social requirements. By starting from this point, creation of the most suitable physical environments for people will be possible via providing that actions, which are necessary for meeting all physical and psychological requirements at an individual and social level, are taken. However, today's design models are on the road to remove designing phase from these traditional patterns. Designs reject ordinary design processes and alternative or in other words, experimental design models are developed. Erdönmez (2011) states that design period is a period in which new thinking and production methods that contain experimentality are revealed and subject is dealt from different perspectives. Şentürk (2011) states the experimentality as follows: "...the architecture is performed via social limitations and experimental architecture exists with its own limitations. Relating to convergence of experimental and performance, experimentality has also radicalism claim in addition to them. Experimental is against established system...you may be experimental in each course..." When examining this study in parallel with explanations of Erdönmez and Şentürk, an alternative perspective is brought to traditional psychology-architectural relations, there is individual in the center of this relation. Within this scope, in this study individual tried to get free of his/her own demand and needs, in other words, of individual perception psychology and include him/herself in the center of design of psychological science. The followings are important phases; general definitions on the personality disorders that are used at the phase of design in the study method part and explanations about the fact that how they are conceptualized.

5. Personality Disorders Of People Selected Within The Scope Of Study And Phase Of Occurrence Of Design Concepts

The personality disorder is a pattern of internal lives and attitudes that show deviations which are more important than expected and that present continuity according to culture of the individual. They start during years of adolescence or adulthood, become permanent in time and cause deterioration in functionality. They should be deprived of flexibility, spoil harmony and cause certain deterioration in functionality or personal problem to be able to evaluate personality characteristics that may be seen in everyone at different manners as personality disorder. This unchanging attitude and behavioral patterns show themselves in those fields:

- In opinion differences (comment of a person him/herself, others and events),
- In differences of emotions (frequency, density, variability and compliance of emotional response),
- In difficulties among people,
- In difficulties about controlling impulsions (Şahin, 2009).

As it can be understood from definition of the personality disorder of Şahin, the personality disorder is deterioration of potential situation. The first aim in a design study which was performed over personality disorders that come to mind at first is that potential acceptances of residence that is a defined place should be destroyed. Personality disorders that were examined within the scope of study, definitions and conceptualization that will direct the design are as follows:

5.1. *Capgras Personality Disorder*

In Capgras Syndrome that is a hallucinational disorder, an individual believes that his/her relatives, people that he/she loves or objects around him/her are changed with similar ones. This is a psychotic disorder, in which similar people who have fake appearances and with whom the individual has close relation take part and which is characterized with illusion about the fact that a conspiracy is organized against him/her [URL1].

The following concepts that will direct the design by setting off definition of Capgras Personality Disorder can be produced:

- good
- bad
- similar
- twin
- nesting

5.2 *Antisocial Personality Disorder*

In this personality disorder, there is a concern about the fact that an individual can be judged by others. This is an anxiety disorder in which an individual has opinion about the fact that he/she may be embarrassed and ashamed in social environments and he/she has continuous fear. People who have this personality disorder are anxious about situations that necessitate that they should interact with others or that they should perform an action beside others and they try to avoid them as far as possible [URL1].

The following concepts that will direct the design by setting off definition of Antisocial Personality Disorder can be produced:

- hiding
- fear
- miscommunication
- solidity
- impermeability
- secrecy of social life

5.3 *Bulimia Nervosa Personality Disorder*

The most distinct characteristic of Bulimia is that an individual eats too much by over gorging from time to time even if he/she knows that this situation is abnormal. Following eating, vomiting or excessive lactative usage occurs. The person is scared of not stopping eating voluntarily. A depressive humor and insulting opinions attract attention following eating seizures. He/she eats secretly without being conspicuous. Eating seizure is generally completed with stomachache, sleeping or voluntary vomiting [URL1]

The following concepts that will direct the design by setting off definition of Bulimia Nervosa Personality Disorder can be produced:

- extremeness
- hiding
- unbalance
- different or secret eating area

5.4 *Multiple Personal Disorder*

People who have Multiple Personal Disorder have tendency for carrying more than one personality. These people have at least two personalities. The individual makes transition among these two personalities. In this Disorder, there are unconscious personality structures because of the fact that there is no personality integrity in individual. There is not any fixed personality. The individual acts differently every day and with different personality [URL1].

The following concepts that will direct the design by setting off definition of Multiple Personality Disorder can be produced:

- multitude
- difference
- ineffability
- different integrities
- unawareness
- individuality
- singularity

5.5 Borderline Personal Disorder

Individuals, who have Borderline Personal Disorder, are excessively unbalanced in their private relations, attitudes, emotions and opinions about themselves. The followings are the most important characteristics of this disease: immediate and excessive change in the mood, stormy relationships, ups and downs in self-confidence, attitudes that cannot be doped out and that are aimed at damaging him/herself. Ups and downs in the mood are observed within day. These individuals take pleasure from the changes in their mood that they cannot distinguish [URL1].

The following concepts that will direct the design by setting off definition of Borderline Personality Disorder can be produced:

- immediate ups and downs
- fluctuation
- cycle
- pleasure
- change

5.6 Apotemnophilia Personality Disorder

Individuals, who have this personality disorder, see any organ in their body as excess or foreign. For instance, they think that their arms or legs ruin their body integrities and they want to get rid of them and they also believe that they will be more complete and happier [URL1].

The following concepts that will direct the design by setting off definition of Apotemnophilla Personality Disorder can be produced:

- integrity
- feeling of broken
- deterioration
- deformation
- withdrawal

6. Combination Of Personality Disorders And Design: Residence Having Personality Disorder

In this study where no design test was made over the personality disorders that were conceptualized by setting

off above definitions, designs that are given in the following tables were produced.

Table-1 Residence design of student named Sümeyye Yaşar



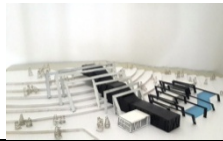
Subject of Personality Disorder	Design Concepts	Design
Capgras Personality Disorder	<ul style="list-style-type: none"> • good • bad • similar • twin • nesting 	  
Explanation of Design	Starting point of the design is bad twin concept having main characteristic of Capgras PD (Personal Disorder). Designer defined twin forms as good and bad with opposite colors and nestled them by placing them with different angles.	

Table-2 Residence design of student named Zeynel Eroğlu


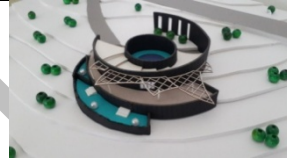
Subject of Personality Disorder	Design Concepts	Design
Antisocial Personality Disorder	<ul style="list-style-type: none"> • hiding • fear • miscommunication • solidity • impermeability • secrecy of social life 	 
Explanation of Design	Starting point of the design is escaping from society that is main characteristic of Antisocial PD. The designer did not give any façade outside the residence, structured the entire residence around a circular yard and made the residence in an introverted way. All living areas were hid behind thick high walls. Social activity areas such as pool, party saloon, sport saloon, cinema saloon hid in the residence have no communication with the outside.	

Table-3 Residence design of student named Tuğba Candan




Subject of Personality Disorder	Design Concepts	Design
Bulimia Nervosa Personality Disorder	<ul style="list-style-type: none"> • extremeness • hiding • unbalance • different or secret eating area 	  
Explanation of Design	Starting point of the design arose from excessive and unbalanced eating habit that is main characteristic of Bulimia Nervosa PD. The designer planned an unbalanced editing in place organization within the residence. Especially kitchen was distributed to different areas within the residence and used excessively and largely as square meter. Within the residence, secret gardens that will serve for kitchen were designed. Its form consists of unbalanced and unproportional rectangles in a measuremental way.	

Table-4 Residence design of student named Sinem Ülkebay


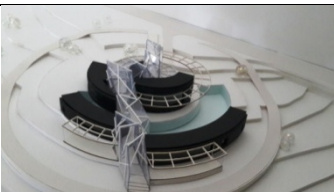
Subject of Personality Disorder	Design Concepts	Design
Explanation of Design	<ul style="list-style-type: none"> • multitude • difference • ineffability • different integrities • unawareness • individuality • singularity 	 
Explanation of Design	Starting point of the design is unaware and different personality that is main characteristic of Multiple PD. The designer produced different residence units that are independent and unattached within a singular integrity. Each place that was planned as room after entering from the main entrance of the residence has a characteristic of residence. The main function of all these independent residence is combination of transparent transition element that is corridor.	

Table-5 Residence design of student named Merve Caymaz

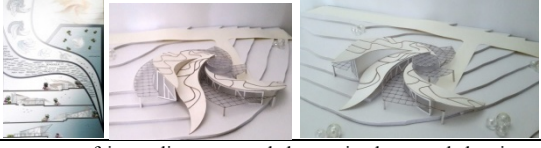

Subject of Personality Disorder	Design Concepts	Design
Borderline Personality Disorder	<ul style="list-style-type: none"> • immediate ups and downs • fluctuation • cycle • pleasure • change 	
Explanation of Design	Starting point of the design is the concept of immediate ups and downs in the mood that is main characteristic of Borderline PD. The designer used this main characteristic in shaping the form. Form of the residence is completely rough and had different increase and decreases which may consider as immediate. All these immediate increase and decreases were rotated around a main center.	

Table-6 Residence design of student named Nurşen Sönmez

Subject of Personality Disorder	Design Concepts	Design
Apotemnophilla Personality Disorder	<ul style="list-style-type: none"> • integrity • feeling of broken • deterioration • deformation • withdrawal 	
Explanation of Design	Starting point of the design is the concept of deformation that is main characteristic of Apotemnophilla PD. The designer essentially destroyed the integrity of an equilateral triangle form and placed them one after the other with random angles. Triangles, whose integrity was lost, was placed into a rectangle whose edge parts were cut disproportionately and it was tried to catch a different integrity search.	

7. Conclusion

It is obvious that architectural discipline is in an interdisciplinary position as an information field. Gökbayrak (2007) states that interdisciplinary studies for the architecture will be doubtlessly stimulating and perspective expander in future years. Leach (1997) states that interdisciplinary excessive limit provides possibilities that reveal “how can the architecture can be produced in a different way”. Mennan (1999), defending studies of different disciplines all together in architectural area, states that the architecture does not become distanced from this experimental information production effort via new study areas occurring via crossing of limits of the disciplines. Teymur (1998) states that “the place” is subject of many disciplines, provides concept of “place between the ranges of disciplines” and grounds the basis of interdisciplinary studies on place information. In this study where it is aimed to show that architectural product can be designed by benefiting not only from inputs of the architecture but also from different disciplines, architecture and psychology area were used as an interdisciplinary model. It is seen that psychology discipline can be transferred into place design by conceptualizing disorders to those selected from the area of personality disorders and that the place can be shaped with concepts produced over different disciplines that were used in the place. Within this scope, it was concluded that defined place which will be designed in architectural product design can be used in construction of different disciplines by being instrumentalized rather than stereotyped architectural characteristics.

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INTE 2014

An investigation of teacher candidates' metacognitive skills

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Abstract

The aim of the study is to determine whether the metacognitive skill levels of the English language teacher candidates change depending on the gender, grade level and the graduated high school type and reveal the relationship between the metacognitive skills and the academic success. The study group of the research in relational screening model consists of 210 teacher candidates and "Metacognitive Skills Scale" developed by Altındağ (2008) has been used as the data collection tool. As a result of the study, it has been revealed that the metacognitive skills of the teacher candidates have been in middle level and it has shown a meaningful different for the advantage of the female students and it has not shown any difference depending on the type of the graduates school and the grade level. A positive and low-level relationship has been detected between the metacognitive skill levels and the academic success averages. The findings of this study have revealed the contribution of the metacognitive skills to the academic success and therefore, to the learning and it has been suggested that the activities improving these skills should be frequently applied in the learning environment.

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Peer-review under responsibility of the Sakarya University.

Keywords: Metacognition; metacognitive skills; teacher candidate

Introduction

It is necessary that the individuals living in the Information Era should know the ways of accessing to information, should be able to use the information they reach and should be able to generate new information. The individuals to have these qualifications is possible with their learning how they will learn, in other words, their learning to learn. Many cognitive psychologists have tried to explain why some individuals have learnt more than others and why they remember more out of what they have learnt when compared to the others. The answer of this question lies in the process of "*metacognition*". In the literature, there are different definitions related to the metacognition (Lories, Dardenne & Yzerbyt, 1998) which is expressed as the basic characteristics of the human cognition. Some researchers define the metacognition as "*thinking over thinking*". In addition to this, it is expressed that metacognition includes the knowledge and beliefs of the individual related to his/her own cognitive processes and the arrangement of these cognitive processes (Ormrod, 2006). Flavell (1979) who has brought this concept to the literature and started the basic studies related to this defines the "metacognition" as "the monitoring of understanding and the awareness of his/her own cognitive processes for an individual and being able to control them". While according to Brown (1978), the metacognition is expressed as the awareness and arrangement of the thinking processes used by the students in the events of planned learning and problem solving, it has been considered as the structure expressing what the individual knows about his/her own cognitions and how s/he controls this by Forrest-Pressley & Waller (1984). While Marzano et. al. (1988) see the metacognition as the awareness of an individual for thinking while carrying out the certain tasks and his/her usage of this so as to control this later on. Hacker (1988) has expressed that it is the monitoring and arrangement of these situations in a

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purposeful way with the knowledge of the individual and the knowledge of the cognitive and emotional situations of the individual (as cited in Akın & Abacı 2011). The eye-catching points in these definitions related to metacognition are the monitoring and arranging functions of the cognitive processes. As a word, cognition taking place in metacognition is related to the metacognition and it is a concept showing difference. While cognition is expressed as the skills necessary to reveal a mission; metacognition includes the skills necessary to be able to understand how these skills have been revealed (Rivers 2001; Schraw 1998; cited in Imel, 2002).

Metacognition refers to a high level of thinking that involves active control over the cognitive processes engaged in learning and consists of two components: (a) knowledge of cognition and (b) regulation of cognition. Knowledge of cognition includes: (i) declarative, (ii) procedural, and (iii) conditional knowledge and refers to what individuals know about themselves as cognitive processors. Declarative knowledge relates to knowledge about oneself as a learner and the factors that influence his performance. Procedural knowledge is the knowledge of how to perform a specific task and conditional knowledge refers to knowing when and why to use a skill or strategy. Regulation of cognition refers to how well students can control their learning mechanism and includes three essential skills: (a) planning, that has to do with the appropriate selection of strategies for an effective performance, (b) monitoring, that concerns a person's awareness of comprehension and task performance, and (c) evaluating, that is about the product appraisal of a student's work and the efficiency of his own learning (Schraw, 2002; cited in Chatzipantelia, Grammatikopoulos & Gregoriadis, 2014).

Metacognition comes to the meaning of the high-level thinking including the active control in the cognitive processes related to learning. The planning, monitoring of understanding and assessment process of the completion of a task conducted for the purpose of reaching the task of learning given are related to the metacognition (Livingston, 2003). The individual to know how s/he will learn, thinking and working strategies are within the metacognitive skills (Slavin, 2006). According to Woolfolk (2010); metacognition regulating thinking and learning includes three significant skills. These are "planning, monitoring and assessment". Planning includes the time determined for being able to realize a task, the strategies to be used, where to start, which sources will be used etc. Monitoring is the skill including the real-time awareness related to how the task has been realized. Assessment includes the justifications about the processes related to thinking and learning and the products. Some theorists examine the metacognitive skills by separating them into two as self-assessment (the skill of the individual to assess his/her own cognition) and self-control (the skill of an individual to control his/her own cognitive development) (Rivers 2001; cited in Imel, 2002).

The individuals having the metacognitive skills can monitor and direct their own learning processes (Sindhvani & Sharma, 2013). In addition to this, the metacognition includes the selection of the most suitable way to reach the learning task. For this reason, the learners whose metacognitive skills are developed can determine their targets, regulate their learning activities, can get benefit from the different learning ways and they can change the strategies they need (Woolfolk, 2010). The learners having metacognitive skills are expected to be aware of themselves and their learning styles, to behave consciously, to control themselves, to conduct planning, to monitor how s/he learns, to regulate his/her own learning and to assess himself/herself (Doğanay, 1997; cited in Çakıroğlu 2007). According to Huitt (1997), the individuals with metacognitive skill are able to answer the following questions to themselves: What do I know about this subject, topic, issue?/ Do I know what do I need to know?/ Do I know where I can go to get some information, knowledge?/ How much time will I need to learn this?/ What are some strategies and tactics that I can use to learn this?/ Did I understand what I just heard, read or saw?/ How will I know if I am learning at an appropriate rate?/ How can I spot an error if I make one?/ How should I revise my plan if it is not working to my expectations/satisfaction?

1.1. Aim of the study

The aim of the study is to determine whether the metacognitive skill levels of the English language teacher candidates change depending on the gender, grade level and the graduated high school type and reveal the

relationship between the metacognitive skills and the academic success. This study has been conducted on the first and fourth grade students so as to be able to make a comparison between the different education levels. The examination of the metacognitive skills of the teacher candidates is seen to be important in terms of having information about at which level it affects and controls their learning.

2. Method

In this study, relational survey model has been used because the determination of the metacognitive skills of the teacher candidates and its assessment in terms of some variables have been aimed. The survey model is the research approach aiming to describe a situation existent in the past and still existent in the way it exists (Karasar, 2000).

2.1. Study group

The study group of the research consists of the 1st and 4th grade students continuing their education in the department of English Language Teaching in a public state university in Ankara. 80 % of the study group consists of female (n=168), 20 % consists of male students (n=22), 47,6 % consists of first grade students (n=100) and 52,3 % consists of 4th grade students. In addition, 54,7 % of the teacher candidates participating in the study (n=115) graduated from Teacher/Anatolian Teacher Training High School, 30 % (n=63) graduated from Anatolian High School and 15,2 % (n=32) graduated from other high school types.

2.2. Instrument

The scale of metacognitive skills consisting of 30 items and developed by Altındağ (2008) has been used as the data collection instrument in the study. The content validity of the scale has been provided with the related literature review and the views of the experts. The items have been firstly submitted to the expert view and the items have been corrected again in direction of the feedbacks taken. The final version of the pretesting form prepared in the type of 5 point likert scale consists of 55 items. The pilot form of the scale has been applied to 239 students. The respondents have been requested to select the most suitable one from “Strongly Disagree”, “Disagree”, “Undecided”, “Agree” and “Strongly Agree” while answering these items. The construct validity of the scale has been tested with the explanatory factor analysis conducted with the use of the data attained from the trial application. The data attained has shown that the construct validity of the scale has been provided in the desired level. At the end of the factor analysis conducted, it has been determined that the scale is uni-dimensional and 30 items whose factor loads are above 0.44 have been selected so as to form the final scale. The criterion-related validity of the scale has been tested as based on the inner criterion. For this purpose, the differences between the scores taken from the final scale by the upper group of 27 % and the lower group of 27 % have been examined and a meaningful difference has been found between the scores of the lower group and upper group. The Cronbach Alpha reliability coefficient of the scale has been calculated as 0.94 (Altındağ, 2008). The reliability of the scale has been calculated for this study and found as 0.80. Descriptive statistics, t-test for the independent groups, one way ANOVA and Pearson Product-Moment Correlation Coefficient have been used in the analysis of the research data.

3. Findings

3.1. The metacognitive skill levels of the teacher candidates

The first sub-problem of the study has been expressed as “At which level are the metacognitive skills of the English language teacher candidates?”. For the purpose of revealing the metacognitive skill levels of the teacher candidates, three levels have been determined as high, middle and low; the totals of the scores the students have taken have been transformed into percentages and their frequencies have been taken. According to this, those

having taken 80 % and above have been deemed to be at high level, those between 60-79 % are at middle and those having taken 59 % and below are at low level. The descriptive statistics related to the metacognitive skills of the English language teacher candidates are given in Table 1.

Table 1. The descriptive statistics related to the metacognitive skills of the English language teacher candidates

Groups	High		Middle		Low	
	n	%	n	%	n	%
1 th Grade	5	5	88	88	7	7
4 th Grade	5	4,5	96	87,3	9	8,2
Total	10	4,76	184	87,62	16	7,62

It has been revealed that the teacher candidates have taken 125 points as the highest and 67 points as the lowest from the scale. The average of the scores taken from the scale is 103,58. When Table 1 is examined, it is seen that the metacognitive skill levels of the English language teachers candidates are in the middle level. This situation is valid for both the 1st and 4th grade students. When the total is considered, it is also seen that the metacognitive skill levels of the teacher candidates are in the middle level.

3.2. Metacognitive skills of the teacher candidates and gender

The second sub-problem of the study has been determined as “Do the metacognitive skill levels of the English language teacher candidates show a meaningful difference depending on the gender?”. The t-test results of the points taken by the English language teacher candidates from the scale are given in Table 2.

Table 2. The t-test results related to the comparison of the metacognitive skill levels of the teacher candidates depending on gender

Groups	n	\bar{X}	Ss	Sd	t	P
Female	168	104,38	8,89	208	2,35	0,020*
Male	42	100,41	12,93			

p<0,05

When Table 2 is examined, it is seen that there is a meaningful difference for the advantage of the female students between the metacognitive skills of the teacher candidates and their genders.

3.3. Metacognitive skills of the teacher candidates and the grade level

The third sub-problem of the study has been determined as “Do the metacognitive skill levels of the English language teacher candidates show a meaningful difference depending on the grade levels?”. The t-test results of the points taken by the English language teacher candidates from the scale depending on the grade levels are given in Table 3.

Table 3. The t-test results related to the comparison of the metacognitive skill levels of the teacher candidates depending on grade levels

Groups	n	\bar{X}	Ss	Sd	t	p
1 th Grade	100	103,76	10,11	208	0,248	0,804
4 th Grade	110	103,41	9,79			

p>0,05

As it is seen in Table 3, there is no meaningful difference between the metacognitive skills of the teacher

candidates and their grade levels.

3.4. Metacognitive skills of the teacher candidates and the type of the graduated high school

The fourth sub-problem of the study has been determined as “Do the metacognitive skill levels of the English language teacher candidates show a meaningful difference depending on the type of the graduated high school?”. The average and standard deviation of the points taken by the English language teacher candidates from the scale depending on the type of graduated high school are given in Table 5.

Table 5. The average and standard deviation of the scores taken by the teacher candidates from the scale depending on the type of graduated high school

Type of High School	n	\bar{X}	ss
Teacher/Anatolian Teacher Training High School	115	103,20	9,62
Anatolian High School	63	104,71	9,40
Other	32	102,72	11,94
Total	210	103,58	9,92

As a result of the analysis conducted so as to control the homogeneity of the variances, it can be said that the variances are homogenous because the p value in the Levene statistics (Sig.) is higher than 0,005 (0,333). The ANOVA results related to the comparison of the metacognitive skill levels of English language teacher candidates depending on the type of graduated high school are given in Table 6.

Table 6. ANOVA results related to the comparison of the metacognitive skill levels of teacher candidates depending on the type of graduated high school

	Squares Total	sd	Squares Average	F	p
Between Groups	121,40	2	60,70	0,615	0,54
Within Groups	20445,73	207	98,78		2
Total	20567,12	209			

p>0,05

As it is seen in Table 6, there is no meaningful difference between the metacognitive skills of the English language teacher candidates and the type of graduated high school.

3.5. The relationship between the metacognitive skills and academic success

The fifth sub-problem of the study has been determined as “Is there a meaningful relationship between the metacognitive skill levels of the English language teacher candidates and their academic success averages?”. Pearson Product-Moment Correlation coefficient has been calculated so as to find an answer to this question and the result is given in Table 7.

Table 7. The relationship between the metacognitive scores of the teacher candidates and their academic success averages

	N	r	p
Metacognitive Skills	210	0,267*	0,000
Academic Success			

p<0,05

When Table 7 is examined, it is seen that the relationship level between the metacognitive skills and the academic success is .267. this is a positive and low-level relationship (Büyüköztürk, 2011). In this situation, it can be said that an increase in one of these structures which are mentioned within the scope of the study and the fact that both are in relation in the literature is theoretically supported causes to an increase also in the other one.

4. Conclusion and discussion

When the findings of the study are examined, it has been concluded that the metacognitive skills of the teacher candidates are in middle level. This result also shows consistency with the findings of other studies in which the metacognitive skill levels of the teachers and teacher candidates have been examined. In the study conducted by Altındağ (2008), it has been revealed that the teacher candidates being educated in the departments of Primary School Teaching and Secondary School Science and Mathematics have the metacognitive skills in middle level. Similarly, in the study conducted by Temel, Özgür, Şen and Yılmaz (2012), it has been determined that the metacognitive skills of the teacher candidates being educated in the department of Chemistry are dense in the middle level. Kiremitçi (2013) has used the inventory of metacognitive awareness for the purpose of revealing the metacognitive awareness levels of the students of the School of Physical Education and Sports and has set forth that the metacognitive awareness of the students are in middle level. In the study conducted by Jaafar and Ayub (2010), it has been seen that the metacognitive skills of the university students are in middle level. In the study conducted by Duran (2011), it has been concluded that the cognitive awareness skills of the primary school teachers are in middle level.

In the study, the metacognitive levels of the teacher candidates have been compared depending on gender and it has been revealed that there is a meaningful difference for the advantage of the female students. This finding shows consistency with the results of some studies. In the studies conducted by Altındağ (2008) and Tunca & Şahin (2014), meaningful differences have been attained for the advantage of female students in the metacognitive skill levels of the teacher candidates. The research findings conducted by Demir & Özmen (2011), Schleifer & Dull (2009), Sulaiman & Ali (2006) have revealed that there is a meaningful difference for the advantage of female students in the metacognitive levels of the university students. In the study conducted by Sheorey & Mokhtari (2001) to reveal the metacognitive reading strategies of the university students, it has been concluded that the female students have metacognitive reading strategies at higher levels and at meaningful levels when compared to those of the male students.

According to another result of this study, the metacognitive skill levels of the teacher candidates do not change depending on the grade level and the type of graduated high school. In the literature, there are studies which reach the conclusion that the metacognitive skills do not get different depending on the grade level and the type of graduated high school. In the study conducted by Deniz, Küçük, Cansız & İşleyen (2013), it has been revealed that there is no meaningful difference between the metacognitive awareness of Secondary School Mathematics Teacher candidates and their grade levels. Özsoy & Günindi (2011) have reached the conclusion that there is no meaningful difference between the metacognitive awareness levels of the teacher candidates studying in the department of Preschool Teaching and the type of the high school they graduated.

It has been concluded that there is a positive and low-level meaningful relation between the metacognitive skill levels of the teacher candidates and their academic success averages. According to this, it can be said that an increase in one of the variables causes to an increase also in the other one of the variables. When the literature is examined, the results have been reached revealing that the metacognitive skills are closely related to the academic success. In the studies conducted by Romainville (1994), Schraw & Dennison (1994), Altındağ (2008), Turan &

Demirel (2010), Nelson (2012), Hoseinzadeh & Shoghi (2013), Tunca & Aklın Şahin (2014), positive meaningful relationships have been found between the metacognitive skills of the university students and their academic success. In the study which reveals that there is a meaningful relationship between the academic success and the metacognitive skills an which has been conducted as based on the views of the university students by Vadhan & Stander (1993), as the scores the students get from the tests rise, it has been revealed that the scores they expect get close to each other. Ghonsooly, Khajavy & Mahjoobi (2014) have searched whether the metacognitive awareness of the teacher candidates and their academic performances can be predicted or not and they have reached the conclusion that the metacognitive awareness of the teacher candidates is a strong predictor of their academic performances.

The findings of this study have revealed the contribution of the metacognitive skills to the academic success and therefore, to the learning. Again, according to the findings attained from the study, it is seen that even the 4th grade students cannot gain the metacognitive skills at high levels. It is considered as beneficial that as of the primary education, the activities to develop the metacognitive skills of the students in the classroom environment should be integrated in the lessons and the environment and the opportunities necessary for the students to be learners with self-management should be provided to them.

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An Overview of the World of MOOCs

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Abstract

Massive open online courses (MOOCs) are one of the most prominent trends in higher education in recent years. The term 'MOOCs' represents open access, global, free, video-based instructional content, videos, problem sets and forums released through an online platform to high volume participants aiming to take a course or to be educated. With time and place flexibility, MOOCs gathers scholars and 'like-minded fellow learners around the globe'. Although it has a great prominence in its implementation, there is a lack of research studies and critical papers examining its current situation around the world. For this aim, beginning with the definition and a brief history of MOOCs, this paper examines it from various dimensions: pedagogical and technological implementations around the world and its research focus. Therefore, a literature review on MOOCs characteristics, timeline of its development and a blend of practical issues with the experiences of well-known MOOCs providers are presented.

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Peer-review under responsibility of the Sakarya University.

Keywords: MOOCs, massive open online course, free, video-based

Introduction

Growing in number in recent years, there are millions of registered users of MOOCs offered hundreds of courses around the world. MOOCs are often released by third party online platforms and developed independently by academics. The history of MOOCs is not very far. The term first appeared in 2008 by Stephen Downes and George Siemens and based on 'connectivist' distributed peer learning model. Following it, in 2011, a few more educational videos were developed by the professors from Stanford University and released through open online platforms supported with free web resources. This was the year, MOOCs exploded around the world; the number of it still extends each day increasingly. Later, they established **Coursera** as an independent for-profit technology in early 2012. In the same year, other independent non-profit initiatives such as **Udacity** (set up Sebastian Thrun) and **Udemy** was established. Following it, MIT and Harvard incorporated their MITx platform into EdX. The other platforms Futurelearn and Iversity followed them which are not US platforms but European. They are delivering their courses around Europe. Futurelearn is owned by the UK's Open University which a well-known name in the field of distance education with great pedagogical expertise and experience. Iversity is a German initiative which is proud of being able to take advantage of the European Credit Transfer System. They state that their partnered institutions have the opportunity to offer exams that award ECTS credits. Being the only MOOC platform to have courses that offer ECTS credits, they are working to expand this possibility further. There have been few initiatives for MOOCs production in Turkey to release their courses on US MOOC-providing platforms; however, there is not any available MOOCs platform in Turkey so far.

Fundamental characteristics of a MOOC is being open, participatory and distributed:

- Open

Participation in a MOOC is free and open to anyone who has access to the Internet. One might take more than one course and all the content is open to course takers. The work that is generated through the course (both by the facilitators and learners) is shared and available publicly. Finally, there is openness in terms of the learner's role.

"When learners step through our open door, they are invited to enter our place of work, to join the research, to join the discussion, and to contribute in the growth of knowledge within a certain field" ^[5].

- Participatory

The learning in a MOOC is enhanced by participation both in the creation and sharing of personal contributions, and in the interactions with the contributions of others but the participation is voluntary.

- Distributed

MOOC is based on the connectivist approach; therefore, any knowledge should be distributed across a network of participants. Most of the course activity takes place in social learning environments, where participants interact with the material (and each others' interpretations of it). The course readings, and other learning materials available act as starting points for discussion and further thinking.

MOOCs Models

The first phase of MOOCs development was called cMOOCs period in the comparatively short history of MOOCs. Since then XMOOCs period has started which included online courses that are structured in a more conventional way and delivered through not simple web platforms but some learning management platforms. Coursera, EdX, Udacity, Udemy, Iversity, MiriadaX and Futurelearn deliver some of the well-known MOOCs platforms around the US and Europe.

cMOOCs (the connectivist MOOCs) are based on "connectivist distributed peer learning model. Courses are typically developed and led by academics through open source web platforms" (p.6)(Universities UK, 2013). xMOOCs (content-based MOOCs) are delivered through proprietary learning management platforms of institutions or individual academics.

Siemens (2012) states that the majority of MOOCs today are primarily content-based (xMOOCs) and therefore they are different from the original connectivist premise of a MOOC. Some XMOOCs are also criticized for their pedagogical model based on talking head video lectures without any social learning or interaction. Significant pedagogical concerns have been raised by some MOOCs critics:

- MOOCs are stated to be online version of a textbook. (Cuban, 2013 & Harris, 2013)
- MOOCs are claimed not to prepare learners to create, generate, solve and innovate (Siemens, 2013)

Learners Profile

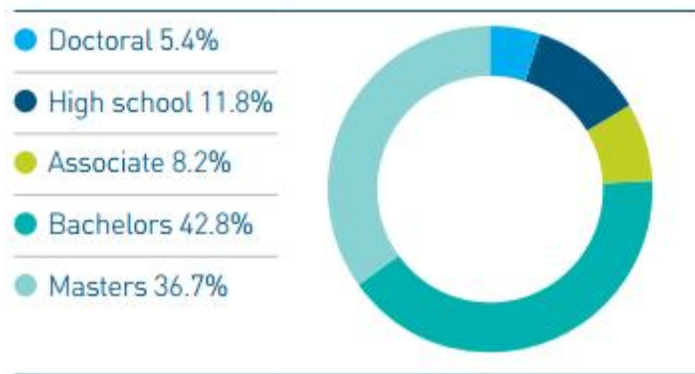
Most of the MOOCs students enroll on the basis of professional interests and objectives, but hobby learners form the largest group. There are few pre-18 students. Learner backgrounds of MOOCs are stated in the Massive Open Online Courses: Higher education's digital moment? (2013) report as follows:

Figure 1: Learner Backgrounds of MOOCs (adapted from Universities UK., 2013)

Learner backgrounds	
• Vocational learners:	professionals looking to maintain their knowledge of a field or explore new areas in order to develop their careers through flexible and lower cost independent learning models
• Educators and researchers:	education professionals using MOOCs and their resources in their own or other academic fields as open educational resources for reuse and remixing in their own work with students
• Higher education students:	enrolled students accessing MOOCs as learning and teaching resources as part of existing courses utilising video lectures, reading lists and other open educational resources
• 'Hobby' learners:	the long tradition of adults engaging in their own self-directed programmes of study, now able to capitalise on the various 'open web' initiatives such as Wikipedia
• Prospective students:	potential students who are looking to explore different course options and assess if a course may be a potential fit, or who may come to be inspired to embark on more formal studies

The US leader Coursera and Europe's leading platform OpenLearn indicate that most of their students are international outside of US and UK. There is a great demand from India particularly for science and technology courses. Coursera, which is still the world leader of MOOCs, attracted over three million registered users after one year from its launch in April 2012. The profile of the students is indicated in Figure 2 according to the Coursera survey data, January 2013.

Figure 2. The profile of MOOCs students (adapted from Universities UK., 2013)



Some other characteristics of students are as follows:

- Most of them are over 18 year-old students,
- The length of course schedule changes between 5-12 weeks,
- Educational videos might be on a specific course or a topic,
- The length of videos changes between 5-10 minutes,
- The language of most courses are in English,
- Due to high number of participants and the instructional approach (peer learning), assessment of participants are made through multiple choice tests, online assessment tests and peer assessment.

The reasons why people are registered in MOOCs platforms are; they would like to be educated in the field or topic they are interested in; second, they would like to have a certificate while applying for a job. Some instructors guide their students to MOOCs to reinforce, support or prepare them for their in-class teaching. Although taking courses on a MOOCs is free; getting a certificate and taking the exams for these courses is paid. The courses are not accredited; researchers are studying for the determination of the right business model and for their accreditation. Every year, there is a MOOCs Summit being held in Switzerland, Lausanne.

4. MOOCs Pedagogy

To run a MOOC, minimal academic support is enough. The pedagogies relevant for MOOCs are available in the field of distance education for years but now these are implemented to meet the expectations of a great many number of people to take a course for free. The prior implementation, cMOOCs, was based on peer and social-learning models; however, the subsequent model, XMOOCs modeled learning-management based online courses including video-based lectures, assessment and messaging.

The latest courses are typically paced around a weekly structure; students can access relevant sources in their own time. Some of these activities are automated multiple choice quizzes, short videos, document sharing and forums. Courses are based on peer-learning model although there is an expert running the course. There are synchronous learning opportunities (e.g. live seminars) besides asynchronous learning events.

When the structure of the courses are examined one can see that the first MOOCs courses included recorded lectures, notes and assignments which were once released previously through a learning management system for campus students. In time, video lecture format of these courses were improved; today more professional videos including animations and simulations with their interactive characteristics are released as MOOCs.

Most of the courses are in the form of adult short learning courses and for professional development, vocational education and recruitment. Some MOOCs like the Equine Nutrition Course of the University of Edinburgh target the students working with horses around the world, often for the locations who do not have ready access to higher education institutions.

Basically, MOOCs courses based on three areas of student engagement (Grainger, 2013):

- Video lectures: Video lectures in MOOCs have various presentation styles, from talking heads to lecturing instructors. Subtitles (primarily English, but other languages are being introduced) are provided by Coursera. The running time for the lecture videos is usually 5-10 minutes each with in-video quizzes embedded.
- Assessment: Assignments are primarily evaluated through the use of: (a) auto-graded multiple choice questions or auto-graded programming assignments, (b) peer review assessment where students themselves evaluate and grade assignments based on a defined rubric set.
- Forums: Forums are where students post questions and other students replies, and are the main method of student interaction between course takers and instructors. Forums usually consist of general discussion, subject-specific discussion, course feedback, and technical feedback threads.
- Readings: Most MOOCs do not require students to buy books, and most readings are available online or provided by course instructors; however, Coursera makes money through an affiliate program with Amazon.com (Rivard, 2013).
- Live video sessions: In addition to the weekly lectures, there are live video sessions with the course instructor.
- Activities: A range of instructional activities are offered, with the aim of allowing students to further test their understanding of the course concepts.
- Additional video resources: These were scripted videos to help comprehension of scenes.
- Social media: Students are encouraged to continue their discussions on dedicated pages on other social media platforms, such as Facebook and Google+.

A study performed by the University of Illinois Springfield that reviewed 5 MOOCs showed that the MOOCs tended to:

- a) be objectivist rather than constructivist
- b) be primarily teacher-centered
- c) focus on convergent answers
- d) be highly-structured
- e) provide a mix of abstract and concrete content
- f) rely on feedback generated by learners
- g) focus on individualistic learning, with some encouragement towards online meet-ups and discussion forum participation
- h) possess a mix of authentic and artificial assignments
- i) set the user role in the middle between active and passive (Swan, Day, Bogle & Matthews, 2013).

One of the problems MOOCs researchers study on are how to assess learning with those great number learners. Automated grading systems are being used in general. Yuan & Powell (2013) found that most of the assessment in MOOCs are implemented through multiple choice questions with automated answers and peer feedback. Hardesty (2012) stated new techniques have been proposed for developing more sophisticated automatic grading systems and trends are emerging to try to include feedback from a variety of sources such as machine algorithms, teachers, experts, and peers.

5. Business Model

There is not a clear business model has been decided yet for MOOCs. Providers are still exploring potential revenue opportunities. World leaders, Coursera and EdX, have a revenue sharing arrangements between their partners. The following are some of the issues negotiated with the partners:

- The universities should pay a fee for support to develop online courses,
- Profit sharing arrangement should be course specific, depending on the period that a course is maintained, how long it appears in the institution's portfolio,
- A quality assurance check should be administered,
- Partner institutions have the right to use the course platform for their own internal courses.

Some of the ways of generating revenues are educational services such as licensing of courses or certifying the course(s) would be paid. Time to time some surveys are held by the owners of course platforms. The courses are expected to conform required structure and some platforms require courses to quality review processes. Some can even withdraw courses that do not adhere to its required standards.

6. Conclusion

Massive open online courses (MOOCs) are one of the most prominent trends in higher education in recent years. It represents open access, global, free, video-based instructional content, problem sets and forums released through an online platform to high volume of participants aiming to take a course or to be educated. With time and place flexibility, MOOCs gathers scholars and learners around the world. MOOCs is the latest trend in the field of distance education which seems to go on for some time which indicate a significant need of research studies on it.

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INTE 2014

Analyse of the expectations of the sports management students in terms of quality

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Abstract

At the present time sport managers should have field specific qualifications instead of the qualifications of any manager. Accordingly, sports management programs which sport managers have trained have to meet expectations of the students and partners. It is aimed by this study that the determination of expectations and views of the students who are studying at School of Physical Education and Sport Management Program. In this study a question form is prepared in order to learn the order of choice and reasons, proficiency of subjects and academicians in terms of quality and quantity, what do they aim after the graduation and quality expectations about the preferences instead of department. The sample group of the study is 150 students of Sakarya University School of Physical Education and Sport. The items in the research have examined according to class, gender and education type variables and differences are considered. It is considered that the study shall provide attribution to the field in terms of identifying the expectations of the students and enriching the program processes.

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Peer-review under responsibility of the Sakarya University.

Keywords: Sports management programs, expectations, quality.

Main text

1. Structure

Education becomes important as the science and technology urged the social life to change. The education which consist the social life widely, has a great role in the system. In this regard, sport activities are all within the scope. Physical education and sport of which importance increase parallel to rapid technological developments are the only disciplines that could be gained by the majority of the educational objectives. Because physical education and sport is a field in which physical, mental, emotional and social developments of the individuals are provided. When considered from this point of view the very first realized issue is the need of qualified personnel in the field of physical education and sport.

It is hoped that the situation of the Turkish sport in the future would be better than now by shaping the condition of the management mentality of those who manage and lead the sport in Turkey in the Sport Management Departments of universities. In this regard the concern of those persons on serving their professional careers as successful sport managers in public or private institutions should be cleared. Considering these facts, the aim of this study is researching why the students in School of Physical Education and Sport, Department of Sport Management are preferred this department and their expectations and solutions by considering the current situation.

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.2. Theoretic Structure

.2.1. Definition of Manager and Sport Manager

As it is known management is applicable in each field where a group of people make effort for specific works. There is manager and managed when management is discussed. The manager is the person who can provide operation of the organization in the most sufficient and efficient way and benefited from the qualifications such as smartness, experienced, wised and leader while performing the organization's objectives. The sport manager is the person, who organises the persons working in the sport institutions, gives orders, organizes and diverts the group works for the similar objective, takes the charge and audits the process in order to reach the targets set and fulfil the duties in the field of physical education and sport. In other words sport manager is the person who takes charges to conduct and direct the sport service and activities, charged and responsible to who leads the sport institutions to success in accordance with the establishment targets. As the progress of the sport in every aspect, to increase the level of performance of the targets is connected to existence of a good organisation; it is also connected to sport managers who provide an objective point of view and practical sport managers (Development Plan, 1983).

The need of qualified personnel in sport institutions and organizations is important especially for the manager positions as in each field. Sport management is accepted as a profession and it is known that sport cannot be managed unprofessionally and just wonder or love even though the sport potential nowadays. Because of that reason sport managers who are going to be employed at the sport field should have personal skills, experience, professional knowledge and sport manager education instead of loving this job. In short sport manager is the person who knows sport and management, human, athletes and society very well, conducts his/her duties willingly and consciously in accordance with the aims of the sport organisations. (Yetim, 1991: 15-18).

Sport managers are the persons who have important roles on management of the sport institutions and organisations successfully, disseminate sport and establish on scientific bases (Karaküçük, 1988:47).

.2.2. Characteristics and Duties of the Sport Manager

The success of the sport managers is possible in case having various professional, personal qualification and characteristics and applications of such skills successfully. Some of the mentioned characteristics are management and leadership ability, experience, diplomacy, flexibility, self-criticism, motivation and team work. A good sport manager should have characteristics such as administrative attention, correctness, good human and social relations, decision making ability, health and physical suitability for profession, accepting volunteered responsibility, business sense, using management techniques and intellectual capacity etc. Because the success of sport institutions and organisations are hugely connected to qualification and characteristics of managers. Because of that reason the sport manager who direct the sport and conduct the performance of the modern sport management should not waste pecuniary and human resources of the organisation by using management planning, organisation, coordination, and communication and audit functions as tools. Therefore the sport manager should have field information (Karaküçük, 1989: 362-363).

Sport manager have to establish relationships with trainers, athletes, referee, personnel, families, audience, managers of its own and other organisation, journalists, representatives of international institutions, politicians and any kind of person with different culture level and conduct management business in order to meet all of needs. It is also known that sport managers have important role on conducting sport policies within the international level and inside the country in accordance with the national interests and in compliance with the modern sport sense (Tosun, 1974: 276).

Development of the sport managers is very important for this issue. Development of knowledge and skills of managers and providing in accordance with the targets of the institution is possible with education. Since the management and leadership attitudes and behaviours are gained with the education of the managers, it is possible to have required knowledge and skill in order to comply with the changing and developing conditions. Manager training is also important for sport as in other fields. The unique structure and operation of sport and sport organisations and rapid developments and changes in this field need sufficient capacity and skilled sport managers

(Y.Kaya, 1984:214). Sport manager should know the points to consider very well and apply them for an effective management. A good manager has to know subordinates very well and it is required to establish good relations to manage them. In fact knowing and understanding people is very hard and take very long time. The sport manager has a short time to lead the team success. Sport manager has to work in coordination with board of directors, trainer and athletes. Sport manager should say the errors in proper way to his/her subordinates and shouldn't afraid of undertaking the responsibility because of the errors of these people. Sport manager should be away from quarrel and should be understanding and tolerant (www.yenimakale.com).

.2.3. Total Quality Management and Customer Expectations

Since sense of total quality has become "quality" easy measurable by the companies and institutions, it also become it understandable and easy accessible. Participation in decision making process and taking active role at production processes points out human or employee oriented management sense in order to achieve "quality" (Şimşek, 2007: 43). Total Quality Management which forms the last part of the quality can be defined as "management of the organisation as a whole in order to be superior then others with all dimensions of all goods or services that are important for the customer (Ören, 2002: 15). There are five conditions of expectations of the customers for a product or service: being ready and accessible when needed, accessing to customer with proper place and time, reliability of the product or service, the possible lowest cost for the customer, suitability of the product or service performance with the customer expectations (Şimşek, 2007: 48).

Method

The universe of the research is the randomly selected 150 students of Department of Sport Management, School of Physical Education and Sport, Sakarya University. The data gathered by the questionnaire are construed by using descriptive and inferential statistic methods.

.1. Data Collection

The questionnaire which has also used in the previous researches (Gavcar et al 2005: 21-39, Turgut et al 2004:91-99, Zorba et al: 2013) is used in order to identify the reasons and expectations of the students while preferring the mentioned departments and recreation departments as data collection tool. The internal consistency coefficient of the questionnaire is found Cronbach Alpha 0,91. The questionnaire is applied by reorganising the questions by taking into consideration of the views and suggestions of field specialists. The objective of the research and the details about filling the form are told to the participants first. No significant difference is found between the participants according to age and gender ($p < 0.05$).

.2. Data Analysis

The analysis of the data has conducted via frequency and percentage distribution by using (SPSS 16.0) statistical package program. Line percentages are considered at interpretations. Independent variables are tested with t-test and Anova test in compliance with the data set. Gathered data is reflected as tables.

.3. Tables

Table 1. Percentages and frequencies about the variables.

Variables		f	%
Age	20 and smaller than	21	14,0
	Greathet than 20	129	86,0
Sexuality	Man	96	64.0
	Woman	54	36.0
Grade	1	57	38.0
	2	29	19.3

	3	26	17.3
	4	38	25.3
Education type	1	68	45.3
	2	82	54.7
Total		150	100.0

Table 2. *The data about why the students preferred the department of the sport management?*

Variables	f	%
Interested	52	34.7
For an academic career	33	22.0
For graduate the university	15	10.0
Direction	18	12.0
Inadequate score for university entrance	15	10.0
Other	17	11.3
Total	150	100.0

The students have identified their preference reason as “interest” in the first row and in order to be called as “license graduate” in the last row.

Table 3. *The data about satisfaction of being student of department of sport management*

Variables	f	%
Yes	95	63.3
No	16	10.7
Partly	39	26.0
Total	150	100.0

Majority of the students seem to be satisfied and minority is not satisfied.

Table 4. *The data about the content of the subject during the education*

Variables	f	%
Inadequate the content	38	25.3
Inadequate the period	4	2.7
There lessons redundant	34	22.7
Inadequate practical field	45	30.0
Inexpedient lessons	13	8.7
Other	16	10.7
Total	150	100.0

The students have identified that the subjects are unnecessary and insufficient and the application fields are insufficient when the views of the department students are considered.

Table 5. *The data about sufficiency of the subjects*

Variables	f	%
Yes	43	28.7
No	51	34.0
Patly	56	37.3

Total	150	100.0
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The students of the sport management have identified that the subject in this department is sufficient partially.

Table 6. *The data about academic sufficiency of the academican*

Variables	f	%
Yes	63	42.0
No	29	19.3
Partly	58	38.7
Total	150	100.0

Majority of the students think the academicians are sufficient and minority of the student think they are not sufficient.

Table 7. *The data about application to sport management department*

Variables	f	%
Yes	63	42.0
No	29	19.3
Partly	58	38.7
Total	150	100.0

It is stated that students attending to special talent test do not preferred sport management department at the first row, minority of them have preferred the department.

Table 8. *The data about self-development of students*

Variables	f	%
Yes	63	42.0
No	29	19.3
Partly	58	38.7
Total	150	100.0

When the questionnaire data is considered, students thin that they can develop themselves at the sport management field but the minority of them think they cannot.

Table 9. *The data about business opportunities of the students*

Variables	f	%
Yes	32	21.3
No	61	40.7
Partly	57	38.0
Total	150	100.0

Most of the student think they cannot find a job easily after the graduation, minority of them think they can

find a job. And most of the students studying at department of sport management do not think to transfer to other department but minority of the students think to transfer to other department. The most preferred department that is preferred by the students is Physical Education Teaching department and the less preferred departments are the other departments.

Discussion and Result

The discussion on the reasons why the students have preferred the department of sport management at Schools of Physical Education and Sport and presentation of the current situation of the expectations of the students of department is stated in this part of the study. Sport management departments accept students with special talent test. During private talent test preference is held from the departments of School of Physical Education and Sport.

The study of Turgut et al (2004), it is determined that the students have preferred the department of sport management because of lack of personnel, by advice of others and concern of not placing to any department. Accordingly it is concluded that it is similar to the study which is held.

When we researched the satisfaction of the students from their department, most of them are satisfied with their department but 10 % of the students are not satisfied with their department. In the research of Kırçık (2005), Naralan and Kaleli (2012), it is found that majority of the students are satisfied with their departments. The rate of unsatisfied students is very low. That issue show parallelism to the study that is held.

But Çitil et al (2006) have found that 61 % of the students are not satisfied with their departments. Again in the research of Şanlıer and Şener (2001), the students have mentioned that most of them want to study in another department and they sometimes want to change their department and a minor group do not exactly want to change their departments. These results are different from the result of the study held.

Negative expectations of the human about the future negatively affect the way that the individual handled his/her problem and adaptability to environment process. Having negative ideas about employment problems and futures of the students of sport management department is also a worrying issue about our future. Since the hope and hopelessness about our future have an important place on our personal productivity. More than half of the students of department of sport management have mentioned that they can develop themselves at sport management field and is hopeful about the future, quartile of them partially and a minor group have mentioned that they cannot develop themselves.

When the students have graduated from their departments, 38 % have mentioned they can find a job, most of them have mentioned that they cannot find job. It is determined that 21,3 % have employed after they are graduated. According to findings of Turgut et al (2004) it is determined that 72,3 % of the students mentioned "yes", 6,2 % of the them mentioned "partially" relating to the issue if they have any concern about business opportunities after the graduation from School of Physical Education and Sport. The results are parallel to the research findings.

In the comparison study of Tholen (2014) which is held between England and Holland, it is mentioned that education and employment of the graduates is a political issue and there should be compliance between education structure and employment strategies after graduation.

According to the study of Nite et al (2013) it is determined that the university should also meet the expectations of the students relating to academic and sport development with the region that is university is located. Meetings about difficulties that they can encounter should be held by the trainers. Instead of academic qualification of the academicians it is expected that they have to provide academic consultancy to students.

Batten et al (2014) have mentioned that the interaction between student and academicians have affected the expectations about academicians.

In the study of Karahan (2013) minority of the students are less satisfied or unsatisfied with placement to a job after the graduation. It is clearly seen that most of the students have small amount of concerns to find a job after graduation and there is differences with the study that is held.

Magnan et al (2014) have constituted a five dimension standard for the targets of the students; communication, cultures, communications, comparisons and societies and made a quantitative study that contains first and second grade students. The expectation about accessing to standard targets within these five dimensions has discovered that it is lower than the first grade in the second grade.

The business expectations of the university students both affect the school and business success. It is expected

that the sport management programs that is prepared to student and partner expectations with quality service will increase both the success in the field and student expectations.

It is observed that experiencing difficulties to find a job, working at the fields instead of their specialty fields or being unemployed negatively affect the expectations of the students who are studying in these departments. As a result awareness in the society should be increased by presenting information about the department to provide employment and program as desired. Also quality and excellence studies on quality and quantity of the academicians, content, facility, being a preferred university, activity areas of university, employment rate of the graduates etc. should be performed.

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Analysis of passives constructions in French based on functional-typological grammar by Givón

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Abstract

The theory of functional-typological grammar by Givón emphasizes on the understanding of communicative grammar of the speakers by investigating the format, meaning and function of language. The present study aims to analyze and propose a conceptual framework of functional-typological grammar by Givón. This theory explains the nature of language as a tool for communication based on pragmatics. This study is gathered from related researches of functional-typological grammar by Givón (2001) with the analysis of French passives. The data is from published documents, books and printed documents, with the exclusion of written language from the Internet sources, namely Instagram and Facebook, and spoken language. The results showed that there were five forms of passives constructions in French which were categorized into prototypical passives and less prototypical passives. The first category was the marked passive with auxiliary as Être + participe passé (the past participle) that shows the agent appeared in the clause and preceded by preposition “par” “de” or “dans”. This includes the similar construction that the agent does not appear in the clause or demote the agent. Additionally, the second category (less prototypical passives) showed three the prominent features. The first feature is the clause that leaves out the auxiliary and maintains past participle in the meaning of passive voice. The second one is the passive in verbal pronominal form or verb with pronoun “se” in the passive meaning. The last feature is the active clauses that begins with subject pronoun “on” to demote the agent. The relationship and differences of anti-passive voice and passive voice were indicated in this study.

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Peer-review under responsibility of the Sakarya University.

Keywords: Functional-typological grammar, French passive voice, prototypical passives, less prototypical passives

1. Introduction

This study focuses on the analysis of passives in French under the theory of functional-typological grammar by Givón. This linguistic typological study investigates differences in the language with the universal types from the empirical data and summarized the data inductively from a number of language studies. Cross-languages study to indicate the universal types is used in the present study. The emphasis is primarily more on language function than form with no preferences on particular theory and analysis. Linguistic typologists consider universal types of language and conceptual framework in language structures, for example original structures of the language that have not been changed or negatively criticized (Kullavanijaya, Pranee, 2002; Prasithrathsint, Amara, 2006).

Language typology has been variedly defined and the typologists propose three main definitions. 1) Language typology is a typological classification of languages that have similar and different language features. Different languages that share similar features are categorized in the same type. 2) Language typology is a study of linguistic pattern and type to indicate the prominent linguistic features of that particular language. This selected

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language pattern is called language domain. This language domain contains different parameters or strategies and each parameter has particular linguistic types. 3) Language typology refers to a type of linguistic analysis that differs from other analysis. This definition originates from linguists who believe that language typology contains communicative function, therefore, functional-typological approach in language is proposed. This approach employs grammatical analysis)Kullavanijaya, Pranee, 2002(and the prominent linguist in this approach is Talmy Givón (2001).

The theory of functional-typological grammar by Givón emphasizes on grammar used by the speakers in form, meaning and function. It is believed that all languages have universal function that can be typologically classified. Givón (2001)'s theory states that this grammar can explain nature of language as a communicative tool used and understood by community members. This linguistic study integrates socio-cultural aspects and pragmatics with the focus on both form and function of language. Context therefore must be taken into account in this theory through the relationship of function and structure of language in mapping. Moreover, cognitive linguistics plays a significant role in Givón's theory as this linguistic field focuses on cognitive system reflecting function and meaning of language. Although sentence-level study is important discourse-level in communicative knowledge is also significant under this theory.

On the part of passive, Givón states that passive is one of grammatical category. Most of linguists nowadays propose definitions of passive that the subject of passive construction is a patient. In this syntactic construction, the agent appears or does not appear and the main verb relates with transitive verb in active constructions. Passive sentences or patient promoted sentences are used interchangeably with active sentences by the speakers based on the significance of the topic. In the case that the speaker wants to emphasize on patient or in the patient-promoted sentence, passive is thus used.

From this theory, researcher employed functional-typological grammar by Givón to analyze and explain French passives syntactic construction and category.

1.1. Objective

1. To study a conceptual framework of functional-typological grammar in voice and de-transitivization of Givón's theory.
2. To use this conceptual framework in the study of structure of French passive voice

Theoretical framework

The theoretical framework in this study is gathered from related researches of functional-typological grammar by Givón (2001) in voice and de-transitivization that transfers transitive verb to be in-transitive verb. The focus of this study is emphasized on the analysis of French passives based on functional-typological grammar by Givón

2. Research procedures

This study is gathered from related researches of functional-typological grammar by Givón (2001) with the analysis of French passives. The data is from published documents, books and printed documents, with the exclusion of written language from the Internet sources, namely Instagram and Facebook, and spoken language.

The functional-typological grammar theory by Givón refers to passive construction that is a type of de-transitive voice. In other words, it is a voice with transitive verb that contains de-transitive function. It is a transition from transitive verb to in-transitive verb which contrasts to active-direct voice. In active-direct voice, the agent as the subject of the clause has the verb in transitive event or transitive verb which does not have the object. Similarly, the agent does not appear which can be predictable and contain de-transitive construction from the following hypotheses.

- 1) Transitivity and voice

Three definitions of transitivity in clause construction to convey the meaning are as below.

- Agent in transitive clauses acts as subject of the sentence and makes the action more obvious.
- Patient in transitive event acts as direct and obvious patient.
- Verb in transitive clause has clear context and acts as verb and auxiliary representing time.

Verb in this construction presents past, perfect and real events.

2) The pragmatics of voice

Concept of the pragmatics of voice from pragmatic's view relates to the relationship between the topic of agent and patient. In the case that the topic of the clauses acts as the agent, it will be active-direct voice whereas the passive voice will occur when the topic is the patient. Followings are explanations.

- Active voice in this clauses type, agent is at the top level and has the highest role in the topic and acts as the subject in the clauses.

-Passive voice, agent is not at the top and does not have the role in the topic. Non-agent in this clause type also has the highest role of the topic.

-Anti-passive voice, agent is still significant in the topic, but the patient in the topic will be less significant than the active voice or this patient does not occur at all. In grammatical aspect, anti-passive voice construction shares a number of in-transitive verb clauses. This construction can be combined with verb or presented indirectly.

Givón states that passive voice construction contains 3 significant grammatical features 1) agent demotion- agent occurring in non-major parts of the clauses or does not occur at all, 2) non-agent promotion- promoting patient, dative by occurring as the clauses subject, and 3) main verb as de-transitive verb in the form of in-transitive verb.

Givón indicates 3 main constructions of syntactic structure of passive clauses as below.

- 1) Syntactic structure that demotes the agent or the agent is not mentioned at all.
- 2) Syntactic structure that the agent is not promoted whereas other parts are promoted
- 3) Syntactic structure of passive voice that maintains passive voice verb as transitive verb. In other word, this construction syntactically uses verb in passive voice.

Additionally, Givón proposes the contextual function of passive clauses in 2 aspects.

- 1) The agent demotion domain is to demote the agent or the agent is not referred to in the clauses. Examples are as follows.

Unknown is the construction that the agent is not mentioned because the agent is unknown or unidentified. For example,

...He was killed (by an unknown person) in the Boer war...

Anaphorically predictable is the construction that is predictable from the agent or aforementioned clauses such as,

...The soldiers invaded the village; soon the entire place was burned down...

Cataphorically given is the construction with the post-reference for example,

...There was no telling what might have happened if he had not been interrupted. The dog had been whimpering and whining...

Generically predictable is the construction that agent is not mentioned from the known agent such as,

The plane was brought down safely.

Universal is the construction that agent is not mentioned from the known facts for example,

...as everybody knew, dogs were psychic...Now, it was known that these were actually fifth-dimensional objects...

Impersonal-subject is the construction that agent is demoted, but still acts as the subject of the clauses to illustrate,

One used to work hard in those days.

They don't eat rice there.

Unimportant is the construction that agent is not necessary to be referred to such as,

They found her nude on the beach last night...

Predictable as the author of the text is the case that writer is understood by the reader such as,

...Enough has been said (by the author) here of a subject which will be treated more fully in a subsequent chapter...

Low thematic import changes the definite article to indefinite article to demote the agent. Normally, topic uses definite article for example,

...his son was run over by a motorcar...

Personal, inter-personal, social, cultural reasons are the middle voice construction, particularly used by children, interpersonal, social and cultural reasons. Verb in this construction is transitive form in active voice, but patient acts as subject as in passive voice for example,

It broke.

2) The non-agent promotion domain is the construction that agent is not promoted, but other parts are promoted such as,

Default/ impersonal that promotes patients for example,

They found his body down-river.

“They” is the subject of non-referential subject clause.

Be-passive promotes passive voice such as,

Be-passive such as,

John was killed in an accident.

Get-passive for example,

Mary got elected on her second try

Middle voice is the construction that verb is in the form of transitive verb as in active voice, but patient is the subject as in the passive voice for example,

The window broke

Potential is transformed from verb to adjective such as,

This book is eminently readable

Givón also mentions the relationships and differences of anti-passive voice and passive voice. In passive clauses, patient is promoted as the subject of clauses and demotes the agent in the clauses. The main verb is transformed from transitive to in-transitive verbs with the passive voice indicator in front of transitive verb. On the contrary, anti-passive voice clauses, agent is important in the topic, but the patient in the topic is more demoted in this clause type that in active voice. In grammatical aspect, this construction is combined with verb or indirectly indicated as the following examples.

Examples of passive clauses are as follows.

(Active) Mary ate the apple quickly.

(Passive) The apple was eaten by Mary.

In passive construction, patient is promoted as the subject of the clauses whereas agent is demoted. Contrastively, anti-passive voice clause demotes patient and passive voice. Following are some examples.

(Anti-passive) Mary ate (patient) quickly.

(Active) Mary slept late.

Furthermore, functional-typological grammar theory by Givón corresponds with the study of Comrie, B. (1989) in Language Universals and Linguistic Typology book. Comrie (1989) states that active voice and passive construction is correlated. Subject of active voice construction is agentive phrase in the passive construction reflected in overt subject in passive construction. Comrie (1989) also considers passive construction in both function and syntactic meaning that both active voice and passive voice constructions are correlated. To be precise, agentive phrase acting as patient in the active voice construction occurs as subject in passive construction. On the other hand, agentive phrase acting as subject in active voice occurs as oblique object.

Additionally, Keenan (1990) (cited in Prasithrathsint, Amara, 2006) summarizes the analysis of linguistics typology from the study of passive voice from languages around the world as below.

1) Passive voice occurs in some languages.

2) Languages with different types of passive voice have only particular common type passive voice or have only common passive voice.

3) Languages with common type of passive voice have more than one different passive voice constructions.

4) Languages with any types of passive voice cover perfective aspect of verb.

5) Languages with more than one common type of passive voice have different passive voice in terms of meaning in aspect.

6) Subject of passive voice must not be interpreted as patient when acting as object of transitive verb in active voice.

7) Different passive voice in one language varies from the amount of impact of the subject in positive and positive way as in Thai language. This difference is found less in languages around the world than difference in aspect.

8) Languages with transformed objective to be passive voice must be able to transform the object phrase to be passive voice.

9) Languages with common passive voice can passivize clause with verb 'give' and 'show' as the subject acting as agent. Passive voice with the agent benefits in the sentences may or may not occur in that language.

3. Analytical result

From the data collection, researcher selected passive constructions in French to analyse and categorize. These constructions were found in newspaper and printed documents, excluded some sources namely the data from the spoken sources and the Internet: Facebook and Instagram. This research article is part of the data collection of the researcher's dissertation.

The data analysis procedures are based on functional-typological grammar by Givón and French passives were categorized into prototypical passives and less prototypical passives. To be precise, prototypical passives share universal qualifications and these passives are mostly used in pairs switching as active voice. In this type prototype passive, subject of passive clauses are derived from object of active clauses, demoted agent appear or does not appear, verbs in passive voice are de-transitive verbs and are marked passive with auxiliary. Less prototypical passives are not normally found and they are lack of some universal qualifications that correspond with the study from Singnoi Wongwattana, Unchalee (2013) on passive constructions in Thai: an analysis in the Framework of Functional-Typological Grammar.

From a summary of French passive clauses forms, five forms are found and explanations are as below.

1) The marked passive with auxiliary as Être + participe passé (the past participle) that shows the agent appeared in the clause and preceded by preposition "par" "de" or "dans"

2) The marked passive with auxiliary as Être + participe passé (the past participle) that the agent does not appear in the clause or demote the agent.

3) The clause that leaves out the auxiliary and maintains past participle in the meaning of passive voice.

4) The passive in verbal pronominal form or verb with pronoun "se" in the passive meaning.

5) The active clauses that begins with subject pronoun "on" to demote the agent.

According to five forms of French passive clauses, only the first and second forms correspond with the study from Chevalier, J.C., et al. (1964), Grevisse, M. (1986). These authors state that passive voice is a promoting patient clause by occurring as the clause subject and agent demotion by occurring in non-major parts of the clause or does not occur at all. Main verb acts as transitive verb and is marked passive with auxiliary as Être + participe passé, the agents are preceded by preposition "par" or "de". Gezundhajt, H. (2003) adds that apart from two prepositions, "dans" is included which correspond with the study of Maligul, Sa-ang (2013), she states that apparent features of passive clauses are marked passive with auxiliary as Être + participe passé, but do not always end the sentence with the agent preceded by preposition "par".

In the third form, the clause leaves out the auxiliary and maintains past participle in the meaning of passive voice. Meaning is the important factors that must be taken into consideration in this form. In the fourth form or

the passive in verbal pronominal form or verb with pronoun “se” in the passive meaning correspond with the study of Buddhapong, Sudarat(2001) on the substitution of the passive form être + participe passé by the verbal form pronominal. These two forms share the similar meanings, but they cannot be interchangeably used in all cases. In verbal pronominal form or verb with pronoun “se” in the passive meaning, state of patient does not appear and agent is not marked. The passive sentences can be seen from syntactic constructions, function and meaning of inanimate agent. These sentences correspond with the work from Maligul, Sa-ang (2013) that the verbal pronominal form or verb with pronoun “se” can be used in the passive meaning.

In the last form, the active clauses preceding with subject pronoun “on” as impersonal-subject to demote the agent acting as clauses subject correspond with the work from Buddhapong, Sudarat(2010) on Etude contrastive des moyens exprimant le passif en français et en Thaï (Contrastive Analysis of Passive Constructions In French and Thai). In her study, French noun phrase constructions order with passive meaning are occurred in third person singular impersonal noun which correspond with Givón (2001)’s work on the agent demotion domain on the part of impersonal-subject that agent is demoted, but still acts as the subject of the clauses.

From these summaries, features of French passive clauses correspond with functional-typological grammar by Givón as below.

1. Prototypical passives

1.1 The marked passive with auxiliary as Être + participe passé (the past participle) that shows the agent appeared in the clause and preceded by preposition “par” “de” or “dans” for example.

a) Fête démesurée, grandiose, le carnaval *est marqué par* l’abolition de tous les interdits,...

b) ...telqu’ils *ont été définis par* la Déclaration de 1789, *confirmée et complétée par* le préambule de la Constitution de 1946,...

1.2 The marked passive with auxiliary as Être + participe passé (the past participle) that the agent does not appear in the clause or demote the agent, for example.

a) Le Président de la République *est élu* pour cinq ans au suffrage universel direct.

b) Voici, la figure idéale du soldat tellequ’elle *était décrite* encore au début du XVII^e siècle

These examples represent French passive clauses in the first and second forms, these forms are prototypical passives sharing universal qualifications and these passive are mostly found. However, the difference is in the first category that shows the agent appears in the clause and is preceded by preposition “par” “de” or “dans”. In the second form, the agent does not appear in the clause or agent is demoted. It is general features of passive voice, agent is demoted by occurring in non-major parts of the clauses or does not occur at all

2. Less prototypical passives

2.1 The clause that leaves out the auxiliary and maintains past participle in the meaning of passive voice, for example.

a) ..., de sorte que les femmes *divisées* en deux lobes,...

2.2 The passive in verbal pronominal form or verb with pronoun “se” in the passive meaning, for example.

a) ..., dont l’oeuvre *se singularize par* sa lingerie raffinée...

b) ...: le soldat est devenu quelque chose qui *se fabrique*; d’une pâte informe, d’un corps inapte,...

2.3 The active clauses that begins with subject pronoun “on” to demote the agent, for example.

a) ..., *on a fait* la machine dont *on a besoin* : *on a redressé* peu à peu les postures;...

These examples represent less prototypical passives, these forms are not normally found, and they are lack of some universal qualifications.

4. Conclusion and Discussion

The results show 3 important syntactic structures of passive clauses by Givón: 1) a syntactic procedure that demotes agent or the agent is not mentioned at all, 2) a syntactic procedure that does not promote agent, but other parts are promoted, and 3) a syntactic procedure of passive voice by maintaining the original syntactic structure of

transitive verb. These results correspond with syntactic structure of French passive clauses.

Results also show the relationships and differences of anti-passive voice and passive voice. In passive voice sentence, patient is promoted as the subject of clause and demotes the agent in the clause. The main verb is transformed from transitive to in-transitive verb with the passive voice indicator in front of transitive verb. On the contrary, anti-passive voice clause, agent is important in the topic, but the patient in the topic is more demoted in this clause type than in active voice. In grammatical aspect, this construction is combined with verb or indirectly indicated.

The analysis of French passive clauses can be summarized into three features: 1) patient promoted clauses by occurring as the clauses subject. 2) agent demotion by occurring in non-major parts of the clauses or does not occur at all. 3) main verb as transitive verbs and transformed in a form intransitive verbs, except to some transitive verbs that cannot be transformed to passive, corresponding with Givón's theory (2001) in passives voice based on functional-typological grammar. In French, passive clauses are marked passive with auxiliary as Être + participe passé that show the agent appears in the clause and is preceded by preposition "par" "de" or "dans". These are prototypical passives of French passive construction.

However, there are some noticeable features in passive sentences in three intransitive verbs namely *obéir*, *déobéir* and *pardoner*. These verbs are followed by preposition à and following noun acts as dative. The verbal pronominal form or verb with pronoun "se" in the passive meaning does not mark state of patient and does not mark agent. Passive sentences in this case can be seen from syntactic structure, function and meaning of agent in impersonal-subject and in the less prototypical passives. In French, the active clauses, beginning with subject pronoun "on" as impersonal-subject to demote the agent, but still acting as the clauses subject, are used.

From French passive clauses forms, passive clauses in textbook and printed documents can be categorized into prototypical passives and less prototypical passives as below.

1. Prototypical passives

1.1 The marked passive with auxiliary as Être + participe passé (the past participle) that shows the agent appeared in the clause and preceded by preposition "par" "de" or "dans".

1.2. The marked passive with auxiliary as Être + participe passé (the past participle) that the agent does not appear in the clause or demote the agent.

2. Less prototypical passives

2.1 The clause that leaves out the auxiliary and maintains past participle in the meaning of passive voice.

2.2 The passive in verbal pronominal form or verb with pronoun "se" in the passive meaning.

2.3 The active clauses that begins with subject pronoun "on" to demote the agent.

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INTE 2014

Analysis of social networks build by teacher training students in classroom

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Abstract

In this study, it was aimed to determine relationship of teacher training students in the classroom with the help of social network analysis. The study was carried out with the relational screening model which is one of the quantitative research methods. The sample consists of 165 teacher training students who are studying in the Primary School Teaching and English Language Teaching departments in Akdeniz University in Antalya. Data were visualized and analyzed with social network analysis applications Ucinet and NetDraw. The analysis carried out has shown that the structural networks of the departments are different and it was found that there is a meaningful relationship among social network positions of students. This study emphasizes by using social network analysis in the classroom atmosphere the education could be more productive.

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Peer-review under responsibility of the Sakarya University.

Keywords: Teacher training students; Social Network Analysis; Classroom atmosphere.

Giriş

Sosyal ağ kavramı, son yıllarda hızla gelişen teknolojinin de getirdiği imkanlarla, kolaylıkla araştırılabilen, üzerinde önemle durulan ve çeşitli araştırmalara konu olan sosyolojik bir kavram halini almıştır.

Sosyal ağ, insan ilişkilerinin çizge kuramı (graph theory) ile gösterilmesine dayanır. (Tsvetovat ve Kouznetsov, 2011). Sosyal ağlar temelde iki öğeden oluşur. Bunlardan ilki düğüm (nodes) adı verilen aktörlerdir. Bunlara ağ oluşturan elemanlar ya da bireyler de denebilir. Diğeri ise düğümleri birbirine bağlayan aktörler arasındaki ilişkiyi gösteren bağlar (ties, links)dır. Düğümler arası bağlantılar yönlü olabildiği gibi (arc) yönsüz de olabilir (edges).

Matematiksel olarak bir ağ, ağdaki her katılımcının aktör ya da oyuncu olarak isimlendirildiği ve bir düğüm (node) olarak gösterildiği bir çizelgedir (Wasserman ve Galaskiewicz, 1994).

1. Sosyal Ağ Analizi

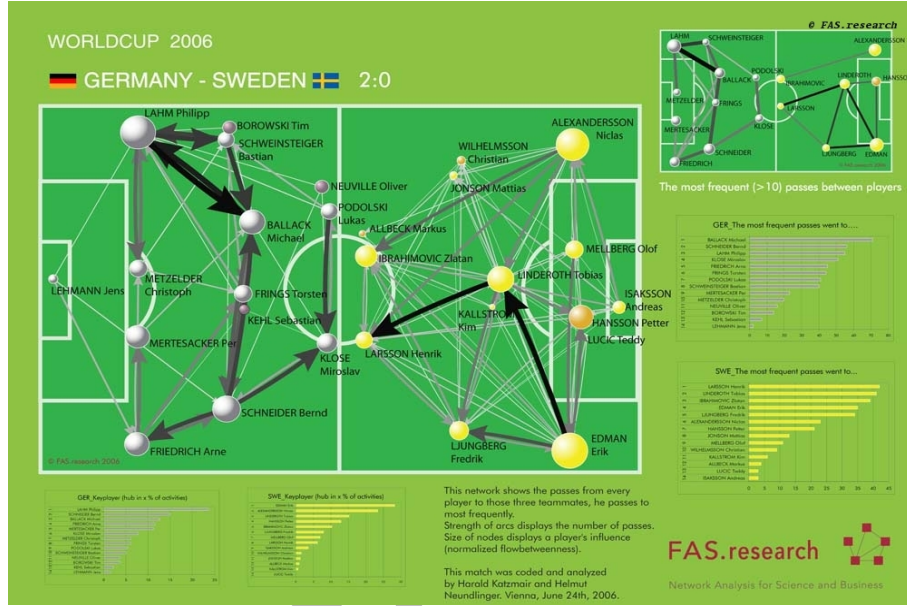
Sosyal ağ analizi (social network analysis-SNA), sosyal ağ yapısını betimlemeyi, görselleştirmeyi ve istatistiksel modellemeyi amaçlar. Sosyal ağ analizi yaparak bir topluluğun veya grubun yapısı hakkında fikir edinebilir, hem birey hem de gruba ilişkin çıkarımlar yapılabilir. Bu sayede SNA sayesinde bireyler ve toplulukla hakkında bilgi üretmek mümkün hale gelir (Hanneman ve Mark).

Sosyal ağ analizini kullanarak;

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- Herhangi bir düğümün ağ içinde ne ölçüde bağlantılı olduğunu,
- Herhangi bir düğümün ağdaki genel önemini,
- Herhangi bir düğümün ağ içersinde ne ölçüde merkezi konuma sahip olduğunu,
- Ağda bilginin nasıl aktığını belirleyebiliriz. (Gürsakar, 2009).

Şekil 1.1.'de örnek bir sosyal ağ analizi çalışması gösterilmiştir. Bu çalışmada da görülebileceği üzere sosyal ağ analizi futbol maçlarında dahi kullanılacak kadar geniş bir kullanım alanına sahiptir. Almanya ve İsveç arasında yapılan 2006 Dünya Kupası maçının sosyal ağ analizinden hangi futbolcuların kilit oyuncular olduğu, hangi futbolcuların oyunda etkisiz olduğu detaylı bir şekilde analiz edilebilmektedir.



Şekil 1.1. Örnek bir sosyal ağ analizi çalışması (Katzmaier ve Neundlinger , 2007)

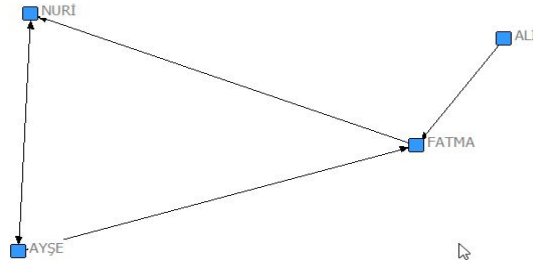
Sosyal ağ analizinde veri işlemede karşılıklı ilişkileri gösteren veri matrisleri kullanılır. Bu matriste sol tarafta yazılanlar seçenler, üst tarafta yazılanlar seçilenleri göstermektedir. Sosyal ağ analizinde kullanılan veri matrislerinin bir örneği şekil 1. 2.' de verilmiştir.

	A	B	C	D	E
A		ALİ	AYŞE	FATMA	NURİ
ALİ		0	0	1	0
AYŞE		0	0	1	3
FATMA		0	4	0	3
NURİ		0	5	0	0

Şekil 1. 2. Örnek bir sosyal ağ analizi veri matrisi

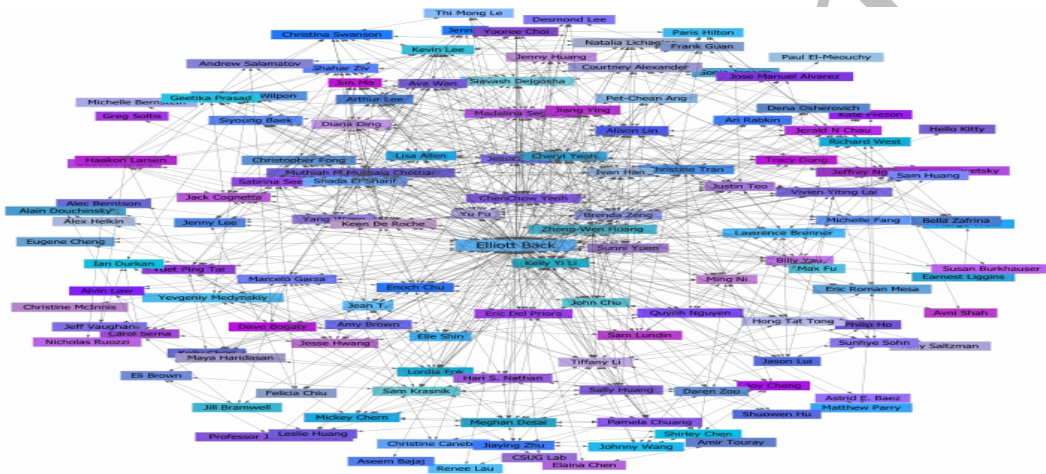
Veri işleme sonrası sosyal ağ analizi yapıldığında bireyler arası ilişkileri gösteren haritalar elde edilmektedir. Bu haritalardaki okların uzunlukları ve yönleri farklı anlamlar taşımaktadır. Şekil 1. 3.' te verilen örnek haritada ilişkiler açıklanacak olursa;

- Ali sosyal ağın dışında kalan düğümü temsil eder. Ali ağda sadece Fatma ile tek yönlü bir ilişki kurmuştur.
- Nuri ağda Fatma ve Ayşe tarafından seçilmiş olup ağın en aktif düğümünü temsil etmektedir.
- Fatma Ali tarafından seçilmiş olup, Ali'yi ağa bağlayan düğüm özelliğine sahiptir.



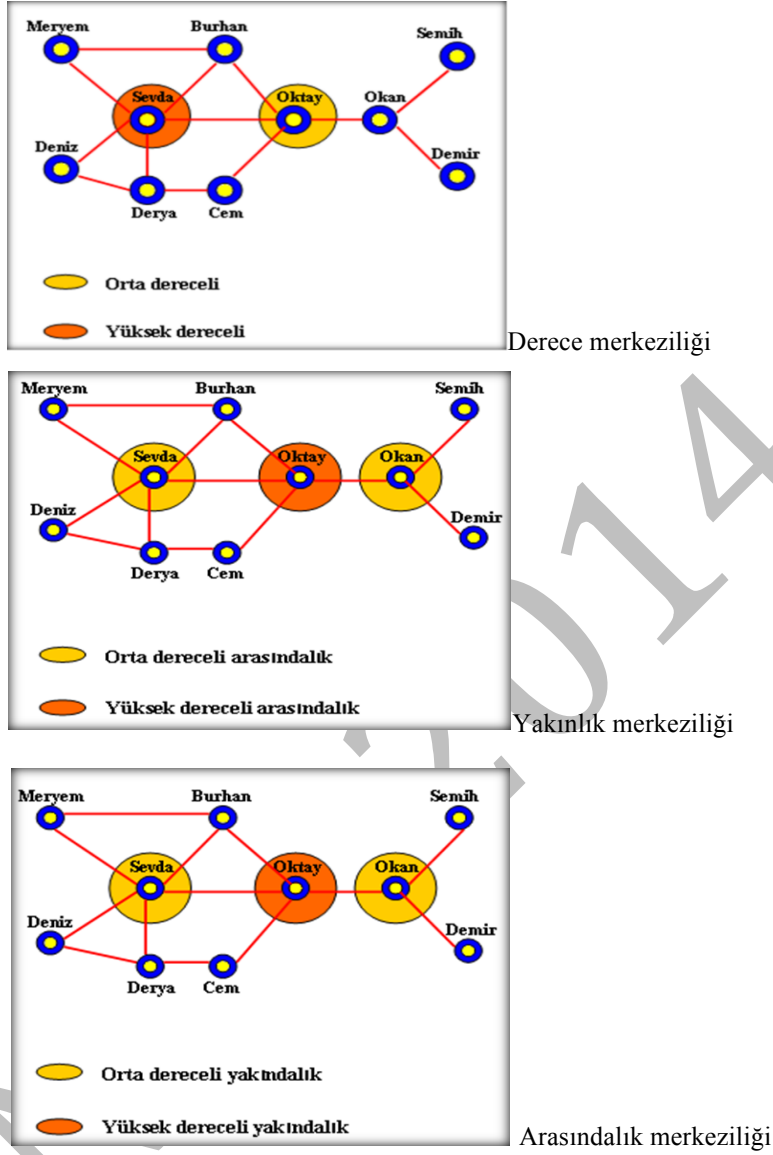
Şekil 1. 3. Örnek bir sosyal ağ analizi haritası

Şekil 1.3.' te görülen harita dört bireyden oluşmaktadır ancak sosyal ağ analizi kalabalık gruplarla da yapılabilmektedir. Şekil 1.4.' te daha kalabalık bir sosyal ağ verilmiştir.



Şekil 1.4. Örnek kalabalık bir ağ analizi haritası

Sosyal ağ analizinin ağ bazında ve aktör bazında ölçütleri vardır. Ağ bazındaki ölçütleri “büyüklük” ve “yoğunluk” tur. Büyüklük, ağdaki toplam düğüm sayısını gösterir. Yoğunluk ise bir ağdaki bağlantı sayısının, ağda yer alabilecek en fazla bağlantı sayısına bölümüyle elde edilir. Ağdaki bütün düğümler birbirleriyle bağlantılı olursa yoğunluk 1'e eşit olur. Aktör bazındaki ölçütleri ise “derece merkezliği(degree centrality)”, “yakınlık merkezliği(closeness centrality)” ve “arasındalık merkezliği(betweenness centrality)” dir (Al, Sezen ve Soydan, 2012). Bunların dışında Eigenvector Merkeziliği yani düğümlerin, o düğümleri seçen düğümlerin ağdaki konumuna göre değer kazandırdığı merkezilik ölçüsü de vardır. Şekil 1. 5.'te aktör bazındaki ölçütlerin örnek dereceleri verilmiştir.



Şekil 1. 5. Aktör bazındaki ölçütlerin örnek dereceleri

2. Araştırmanın Amacı

Araştırma, öğretmen adaylarının sınıf içinde oluşturdukları sosyal ağları incelemek, bölüm bazında oluşan sosyal ağlar arasında farklılık olup olmadığına bakmak ve eğitimin verimliliğini artıracak önlemler alınmasını sağlamak amacıyla yapılmıştır.

3. Araştırmanın Önemi

Sosyal ağ analizi yöntemi ile bir topluluk içindeki arkadaşlık ilişkileri hakkında genel geçer bilgiler elde etmek mümkündür. Sınıflar da birer sosyal alan olduğu için sınıf ortamında eğitim alan öğrencilerin sınıf içinde oluşan sosyal ağlardan etkilenmemesi oldukça zordur. Bu yüzden bu çalışmanın, benzeri daha önce ulusal düzeyde yayınlanmamış bir çalışma olup, eğitimde sosyal ağ analizinin kullanılabilmesinin yolunu açarak alan yazında

önemli bir boşluğu dolduracağına inanılmaktadır.

4. Problem Durumu

Çalışma, sosyal ağ analizi yöntemi ile eğitim fakültelerinde İngilizce Öğretmenliği ve Sınıf Öğretmenliği bölümlerinde öğrenim gören öğretmen adaylarının sınıf içinde oluşturdıkları sosyal ağları incelemektedir.

Yöntem

.1. Örneklem

Araştırmamanın örneklemi, Antalya Akdeniz Üniversitesi Eğitim Fakültesi'nde İngilizce Öğretmenliği, Sınıf Öğretmenliği ve İlköğretim Matematik Öğretmenliği bölümlerinde öğrenim gören 165 öğretmen adayı olarak belirlenmiştir.

2. Veri Toplama Aracı

Veri toplama aracı olarak araştırmacı tarafından geliştirilen 10 sorudan oluşan bir sosyometri kullanılmıştır. Sosyometride her katılımcıdan tercih sırasına göre 3 isim yazması istenmiştir. 1. sıraya yazılan kişiye 3 puan, 2. sıraya yazılan kişiye 2 puan, 3. sıraya yazılan kişiye 1 puan eklenmiştir ve bir kişiden toplam kaç puan aldığı bu şekilde belirlenmiştir.

3. Verilerin Analizi

Sosyometriden elde edilen veriler daha sonra Şekil 2.1.' de verildiği gibi arkadaşlık matrisine dönüştürülerek analize hazır hale getirilmiştir.

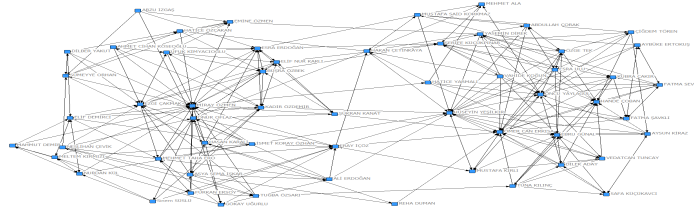
	ALPTEK LERON	ASLHAN TUNÇ	ASLHAN TULUN	BURCU AYDOĞAN	BURCU BEKİR GÜLER	CANER DEMİR
TUNÇ						0,6
TULUN						
TULUN						
DOĞAN		0,3				
LEK GÜLER						
MİR	1,4					
İŞRA KURT						
RGÜN SENTÜRK	1,0	0,3				1,5
TER KAÇAN						
AY		0,3				
N		0,2		0,4		
ALI		0,1				
GİT			0,5			
İTÜK						
AK						

Şekil 2.1. Arkadaşlık matrisi

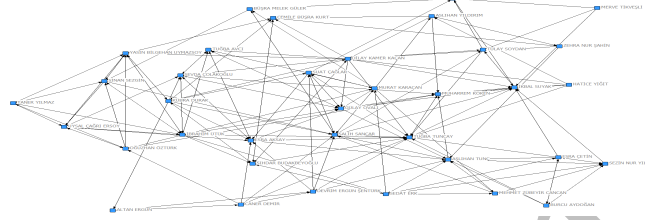
Arkadaşlık matrislerinden elde edilen veriler daha sonra sosyal ağ analizi programlarından Ucinet ve NetDraw ile analiz edilmiştir. Ucinet ağ yapısı hakkında detaylı bilgiler verirken, NetDraw ağın görselleştirilmesini sağlamaktadır.

Bulgular

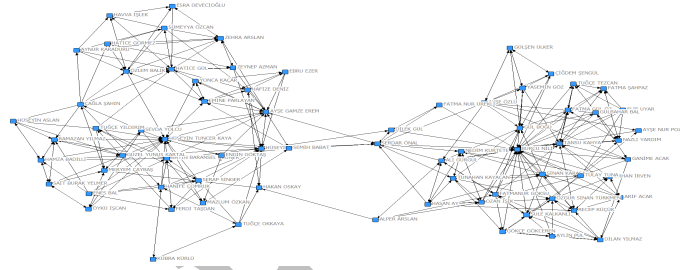
Sosyal ağ analizi İngilizce Öğretmenliği, İngilizce Öğretmenliği(İÖ) ve Sınıf Öğretmenliği bölümlerine uygulanmış ve İngilizce Öğretmenliği için Şekil 3. 1., İngilizce Öğretmenliği(İÖ) için Şekil 3. 2. ve Sınıf öğretmenliği için Şekil 3. 3.' te verilen ağ haritaları elde edilmiştir.



Şekil 3. 1. İngilizce Öğretmenliği için ağ haritası



Şekil 3. 2. İngilizce Öğretmenliği(İÖ) için ağ haritası



Şekil 3. 3. Sınıf Öğretmenliği için ağ haritası

Şekil 3.1, 3.2 ve 3.3'te de görüldüğü gibi her sınıfın kendine özel bir ağ yapısı vardır. Şekil 3.1 ve 3.3'te görülen sınıfların ağ yapıları iki ayrı gruba ayrılmıştır. Bunun sebebi de bu iki sınıfın kalabalık olması nedeniyle dersleri iki ayrı şube olarak takip etmeleridir. Yine de, bu sınıfların ayrıldığı iki şubeyi de birleştiren bireyler bulunmakta ve bu bireyler oluşan iki grup arasında bilgi akışını sağlayan düğümler olarak tanımlanabilmektedir.

Her bir bölüm için ağ yapılarını gösteren sosyal ağ analiz istatistikleri Tablo 3.1.'de verilmiştir.

Tablo 3.1. Bölümlerin sınıf içi sosyal ağ analiz istatistikleri

İNGİLİZCE ÖĞRT. 57 KİŞİ	İNGİLİZCE ÖĞRT. (İ.Ö) 37 KİŞİ	SINIF ÖĞRT. 74 KİŞİ
-------------------------	-------------------------------	---------------------

Avg Degree 5.877	Avg Degree 4.972	Avg Degree 5.556
Density 0.105	Density 0.142	Density 0.078
Closure 0.401	Closure 0.345	Closure 0.401

Sınıf Öğretmenliği bölümünde öğrenim gören ve derece merkeziliği, eigenvector merkeziliği, arasındalığı ve yakınlığı en yüksek olan üç öğretmen adayına ait düğüm dereceleri değerleri Tablo 3.2.'de verilmiştir.

Tablo 3.2 Sınıf öğretmenliğinde eğitim gören derece, eigenvector, arasındalık ve yakınlık merkezilikleri en yüksek olan üç öğretmen adayına ait düğüm dereceleri

Bireyler	Düğüm Dereceleri
	Derece Merkeziliği
BURCU	27
HÜSEYİN	20
AYŞE	14
	Eigenvector Merkeziliği
BURCU	44
TANSU	28
SİNAN	21
	Arasındalık Merkeziliği
SERDAR	970
BURCU	759
HÜSEYİN	580
	Yakınlık Merkeziliği
SERDAR	148
AYŞE	157
HÜSEYİN	157

Sonuç ve Öneriler

Sosyal ağ analizi belli bir sosyal yapıyı anlamakta önemli kolaylıklar sağlamaktadır. Yapılan çalışmada İngilizce Öğretmenliği, İngilizce Öğretmenliği(İÖ) ve Sınıf Öğretmenliği sınıflarında öğrenim gören öğretmen adaylarının sınıf içinde oluşturdukları sosyal ağlar incelenmiş, analizlerle elde edilen istatistikler çalışmanın bulgular kısmında verilmiştir.

Üç ayrı sınıftan elde edilen ağ yapısını gösteren bulgulara bakılacak olursa, ortalama derece değerlerinde en yüksek değer İngilizce Öğretmenliğinde en düşük değer ise İngilizce Öğretmenliği(İ.Ö)de görülmüştür. Ortalama derece ağda herhangi bir kişinin diğer kişilerle yaptığı bağlantının sayısını ifade etmekte olup İngilizce Öğretmenliğinde öğrenim gören öğretmen adayları arasında daha fazla bağlantı olduğu ve bu sınıfta bulunan öğrencilerin birbirleriyle daha çok ilişki kurduğu görülmektedir.

Yoğunluk değerlerinde en yüksek değer İngilizce Öğretmenliği(İ.Ö)de en düşük değer ise Sınıf Öğretmenliğinde görülmüştür. Yoğunluk, ağdaki toplam bağlantı sayısının ağda yer alabilecek tüm bağlantı sayısına oranını ifade etmekte olup İngilizce Öğretmenliği(İ.Ö)de daha yoğun ilişkilerin olduğu Sınıf Öğretmenliğinde ise daha az yoğun ilişkilerin olduğu gözlemlenmiştir. Az sayıda bireyin olduğu ortamlarda bireylerin birbirleriyle daha sıkı ilişkiler kurması daha olası olduğundan bulunan bu sonucunda gösterdiği üzere mevcudu az olan sınıfta yoğunluk en az en kalabalık sınıfta yoğunluk en fazla bulunmuştur. Yoğunluk derecesinin bu farklılığı göstermesi doğal olup, bize daha fazla bilgi vermekte eksik kalmaktadır.

Ağ yapısını gösteren diğer önemli değer, yakınlık derecesine bakılacak olursa orada da yoğunluğa benzer bir durum tespit edilmiştir. Mevcudun az olduğu İngilizce Öğretmenliğinde yakınlık da değer olarak düşük anlam olarak yüksek bulunmuştur. Az sayıda bireyin daha yakın bir ağ oluşturacağı doğal bir sonuç olup mevcutları

farklı olan Sınıf Öğretmenliği ve İngilizce Öğretmenliği(İ.Ö)nin aynı yakınlık derecesine sahip görünmesi bizi mevcudu fazla olan Sınıf Öğretmenliğindeki bireylerin birbirlerine daha yakın olduğu sonucuna ulaştırmaktadır.

Ağ yapısını gösteren analizlerin ardından, bireylerin ağdaki konumlarını gösteren istatistiklere bakılması da ağ anlamak için oldukça önemlidir. Tablo 3.2’de görüldüğü üzere ağda önemli rol oynayan öğrencilerin merkezilik dereceleri verilmiştir.

Bu verilere göre Burcu, Hüseyin ve Ayşe’nin derece merkeziliği oldukça yüksek bulunmuştur. Buradan bu üç öğrencinin sınıfta en çok seçilen öğrenciler olduğu görülmektedir. Örneğin Burcu 27 kişi tarafından seçilmiştir.

Eigenvector Merkeziliğine bakacak olursak, Burcu, Hüseyin ve Ayşe’nin yerini Burcu, Tansu ve Sinan almaktadır. Eigenvector Merkeziliği, Derece Merkeziliğinden farklı olarak düğümü seçen digger düğümlerin ağdaki konumlarını ve önemlerini de dikkate alır. Bu da demek oluyor ki, Tansu, derece merkeziliği daha yüksek olan Hüseyin’den daha az tercih edildiği halde ağdaki konumu daha önemli olan düğümler tarafından tercih edilmiş ve Eigenvector Merkeziliği yüksek çıkmıştır.

Arasındalık Merkeziliğinde Serdar, Burcu ve Hüseyin yüksek değerler almıştır. Bu üç öğrenci sınıf içinde oluşmuş küçük altgruplar arasındaki bağlantıyı sağlayan ve bu grupları ağa yapıştıran öğrencilerdir. Bu bireylerin olmaması ya da gruptan ayrılması durumunda ağ birçok gruba bölünüp dağılabileceğinden ağda bulunmaları oldukça önemlidir.

Yakınlık Merkeziliği ise bir düğümün digger bütün değerlere olan uzaklığını temsil eder. Bir düğüm ağdaki bütün bireylere ne kadar kısa yoldan iletişim kurabiliyorsa yakınlık derecesi de o kadar yüksek demektir. Serdar, Ayşe ve Hüseyin adlı öğrenciler bu yüzden ağdaki bilgi akışını en hızlı sağlayabilecek bireyler olarak görülmektedir.

Bütün bu bulgular ve sonuçlardan yola çıkılarak, eğitimde sosyal ağ analiz yöntemi kullanılarak sınıfların genel ağ yapısı hakkında bilgi edinmenin mümkün olduğu görülmüştür. Sosyal ağ analizi yardımı ile sınıflar ve öğrenciler analiz edilebilir, buna göre sınıfta çeşitli öğretim yöntemleri denenebilir ve verimi artıracak önemler alınabilir.

Daha sonraki çalışmalarda sosyal ağ analizi yapılan sınıflarda ağın dışında kalan bireylerle görüşmeler yapılabilir, ağdan uzaklaşma nedenleri araştırılarak ağların yapılarının korunmasına yönelik önlemler alınabilir. Bu çalışma, sosyal ağ analizinin eğitimde kullanılabileceğini gösteren temel bir çalışma olup diğer çalışmalar için yol gösterici olması arzu edilerek gerçekleştirilmiştir.

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Analysis of teacher candidates' educational internet self-efficacy beliefs in terms of various variables

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ABSTRACT

Nowadays, the rapid developments in informational technologies result in significant changes in the field of education as well as other fields. One of the most important changes is the use of internet for educational aims. In this sense, a new competence is now among the competencies expected from teachers; moreover, educational use of Internet has become a concept regarded for an efficient teaching process. The aim of this study is to analyze teacher candidates' educational use of Internet self-efficacy beliefs in terms of various variables. The sample of the study conducted in descriptive model consists of teacher candidates at a state university. Educational Use of Internet Self-Efficacy Beliefs Scale and Personal Information Form were used as data collection tools. It is concluded that teacher candidates' educational Internet self-efficacy beliefs have meaningful differences in terms of gender, departments they study on, how long they have used the Internet, duration of daily Internet use, the place they get online, and whether they desire to take their lessons online.

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Peer-review under responsibility of the Sakarya University.

Keywords: Educational use of the Internet self-efficacy, teacher candidates,

Introduction

The era we live in is a period that rapid and hardly followable developments are experienced in information and communication technologies. These developments have effected the field of education as well as other fields and the technology has become an indispensable part of educational environments. With the developments in technology, different solutions are preferred in meeting individual needs; and, the Internet -the biggest indicator of technology- has become a technological tool used in every stage of daily life. In this regard, we can say that one of the most frequently used technologies is the Internet (Gündüz and Özdiç, 2008).

That teachers have the ability of using the Internet effectively and improve themselves has become an obligation (Özerbaş, 2010). Internet technology is a beneficial tool in terms of learners; moreover, it is known that teachers also frequently benefit from the Internet as well as learners (Tuncer and Özüt, 2012). Teachers have a significant role in the use of Internet in educational environments. The researches show that teachers' self-efficacy has positive effects on students' attitudes and behaviors towards school (Tschannen – moran et al.; 1998), their success (Ross, 1992), their motivation (Midgley, Feldlaufer and Eccles, 1989) and students' own self-efficacy (Anderson, Greene and Loewen, 1988) (Cited by Gürol ve Aktı, 2010). In this sense, one of the significant features that teachers should have is the Internet self-efficacy. Tsai and Tsai describe the Internet self-efficacy as individuals' perceptions and beliefs about the skills towards Internet use.

Teachers' having high self-efficacy while using it for educational aims make us think that learning process can be conducted more efficiently and productively. That teachers' attitudes towards information and communication technologies are positive and their self-efficacy perceptions are high enable them to perform their profession more productively and in a more motivated way. Based on the fact that teachers should be able to use technology in classrooms in the information age that we are in, we think that teachers who have high levels of educational Internet use self-efficacy should be trained. Thus, it is important to analyze teacher candidates' use of internet self-efficacy beliefs.

.1. The Aim of the Study

The aim of the study is to analyze teacher candidates' Internet self-efficacy beliefs in terms of various variables. With this aim, we try to find responses to the following questions.

What is the level of teacher candidates' educational use of Internet self-efficacy beliefs?

Do teacher candidates' educational use of Internet self-efficacy beliefs differ according to gender?

Do teacher candidates' educational use of Internet self-efficacy beliefs differ according to the department they study?

Do teacher candidates' educational use of Internet self-efficacy beliefs differ according to how long they have used the Internet?

Do teacher candidates' educational use of Internet self-efficacy beliefs differ according to daily Internet use duration?

Do teacher candidates' educational use of Internet self-efficacy beliefs differ according to the place they get online?

Do teacher candidates' educational use of Internet self-efficacy beliefs differ according to whether they desire to take their lessons online?

Method

In the study, we used survey model among quantitative research methods. In survey model, it is aimed to describe a situation from the past or present as it was or is (Karasar, 2009).

2.1.Participants

At the beginning of the study, data were collected from 604 undergraduates at Faculty of Education in Ahi Evran University, Faculty of Education, Department of Computer Education and Instructional Technologies, Department of Primary Education, Science, Mathematics and Classroom Teaching Departments, Department of Educational Sciences, Psychological Counseling and Guidance. However, 5 participants were excluded because of missing data. In Table 1, we can see the distribution of work group according to department and gender.

Table1. The Distribution of work group according to department and gender

Department	Gender				Total	
	Female		Male		N	%
	N	%	n	%		
Computer Education and Instructional Technologies	65	56,5	50	43,5	105	100,0
Science Teaching	103	71,5	41	28,5	144	100,0
Turkish Language Teaching	55	57,3	41	42,7	96	100,0
Maths Teaching	79	77,5	23	22,5	102	100,0
Classroom Teaching	72	73,2	26	26,8	98	100,0
Psychological Counseling and Guidance.	25	56,8	19	43,2	44	100,0
Total	399	66,6	200	33,4	599	100,0

2.2. Data Collecting Tools

“Personal Information Form” developed by the researchers and “Educational Use of Internet Self-Efficacy Beliefs Scale” developed by Şahin (2009) were used as data collecting tools.

Educational Use of Internet Self-Efficacy Beliefs Scale developed by Şahin (2009) consists of one factor and 28 items. The items are scored as Inefficient (1), Partly Efficient (2), Efficient (3), Quite Efficient (4), Completely Efficient (5). Reliability co-efficient of the Scale was measured Cronbach’s alpha 0.96.

2.3. Analysis of Data

We get benefit from SPSS 20 packed program in the analysis of the data. Total scores gathered from the scale were analyzed in terms of various variables. In the analysis of the data, we used descriptive statistics, irrelevant samplings, t test, and one-way variant analysis.

Findings

3.1. Findings about Teacher Candidates’ Educational Use of Internet Self-Efficacy Beliefs

Findings about Teacher Candidates’ Educational Use of Internet Self-Efficacy Beliefs are presented in Table 2.

Table 2. Findings about Teacher Candidates’ Educational Use of Internet Self-Efficacy Beliefs

	n	\bar{X}	SS
Educational Use of Internet Self-Efficacy Beliefs	599	97,19	21,55

When the Table 2 is analyzed, we can say that teacher candidates have a better-than-average educational use of Internet self-efficacy beliefs.

3.2. Findings about the Change of Teacher Candidates’ Educational Use of Internet Self-Efficacy Beliefs According to Gender

The findings about whether teacher candidates’ educational use of Internet self-efficacy beliefs change or not are presented in Table 3.

Table3. Findings about the Change of Teacher Candidates' Educational Use of Internet Self-Efficacy Beliefs According to Gender

		N	\bar{X}	SS	Sd	t	P
Educational Use of Internet self-Efficacy Beliefs	Female	399	93,94	20,18	596	-5,35	,000
	Male	200	103,73	22,75			

When we analyze the Table 3 we see that there is a meaningful difference among teacher candidates' educational use of Internet self-efficacy beliefs according to gender ($t(2-596)=-5,35$; $p<0.01$). It is seen that male teacher candidates' educational use of Internet self-efficacy beliefs are higher than female teacher candidates'.

.3. Findings about the Change of Teacher Candidates' Educational Use of Internet Self-Efficacy Beliefs According to the Department They Study

The means related to teacher candidates' educational use of Internet self-efficacy beliefs according to the department they study are presented in Table 4.

Table4. Findings about the Change of Teacher Candidates' Educational Use of Internet Self-Efficacy Beliefs According to the Department They Study

	Department	n	\bar{X}	Ss
1.	Computer Education and Instructional Technologies	115	106,92	18,34
2.	Science Teaching	144	103,22	19,98
3.	Turkish Language Teaching	96	87,76	25,09
4.	Maths Teaching	102	95,20	19,58
5.	Psychological counseling and Guidance	44	88,89	21,24
6.	Classroom Teaching	98	91,95	18,59
	Total	599	97,19	21,55

In Table 4, according to educational use of Internet self-efficacy beliefs, we can see that the department having the highest mean in Computer Education and Instructional Technologies ($\bar{X}=106,92$), the department having the lowest mean is Turkish Language Teaching ($\bar{X}=87,76$). The results of the variance analysis on whether the differences among the means according to the departments are meaningful or not are given in Table 5.

Table5. Findings of Variance Analysis Teacher Candidates Educational Use of Internet Self-Efficacy Beliefs According to Department They Study

Resource of the Variance	Sum of Squares	Sd	Mean of Squares	F	p	Meaningful Difference
Inter-groups	30788,044	5	6157,608	14,781	.000	1-3, 1-4, 1-5,
Intra-groups	247035,321	593	416,585			1-6, 2-3, 2-4,
Total	277823,366	598				2-5, 2,6

1: Computer Education and Instructional Technologies, 2: Science Teaching, 3: Turkish Language Teaching, 4: Maths Teaching, 5: Psychological counseling and guidance, 6: Classroom Teaching

As a result of the variance analysis, it is seen that the difference among teacher candidates' educational use of Internet self-efficacy level according to the department they study is meaningful ($F(5-593)=14,781$; $p<0.01$). According to the results of Bonferroni test conducted to see which departments have meaningful difference, it is seen that the students in the departments of Computer Education and Instructional Technologies and Science

Teaching are higher than the students in the departments of Turkish Language Teaching, Maths Teaching, Psychological Counseling and Guidance in a meaningful level. There is no significant difference among the students of Computer Education and Instructional Technologies and Science teaching.

.4. Findings about the Change of Teacher Candidates' Educational Use of Internet Self-Efficacy Beliefs According to How Long They Have Used the Internet

The means related to teacher candidates' educational use of internet self-efficacy beliefs according to how long they have used the Internet are presented in Table 6.

Table6. Findings about the Change of Teacher Candidates' Educational Use of Internet Self-Efficacy Beliefs According to How Long They Have Used the Internet

Internet Use Duration	n	\bar{X}	SS
1. Less than 1 year	13	82,33	18,47
2. Between 1-3 years	56	87,92	19,25
3. Between 3-5 years	119	89,45	20,65
4. More than 5 years	408	101,35	20,96
total	596	97,30	21,52

In Table 6, we see that the group having the highest mean of educational use of Internet self-efficacy beliefs level is the group having more than 5 years-experience in using the Internet ($\bar{X}=101,35$). On the other hand, the group having the lowest mean of educational use of Internet self efficacy beliefs level is the group having less than 1 year-experience ($\bar{X}=82,33$).the results of variance analysis related to whether the difference among the means of teacher candidates' educational use of Internet according to how long they have used Internet are given in Table 7.

Table 7: Variance Analysis of Teacher Candidates' Educational Use of Internet self-Efficacy Beliefs According to How Long They Have Used Internet

Resource of the Variance	Sum of Squares	Sd	Mean of Squares	F	P	Meaningful Difference
Inter-groups	21890,040	3	7296,680	17,020	.000	4-1, 4-2, 4-3
Intra-groups	253795,418	592	428,708			
Total	275685,459	595				

1: Less than 1 year, 2: Between 1-3 years, 3: Between 3-5 years, 4: More than 5 years

As a result of the variance analysis, the difference between educational use of Internet self-efficacy levels according to how long they have used the Internet is meaningful ($F(3-592)=17,020$; $p<0.01$). According to the Bonferroni test conducted to see which groups have meaningful difference, educational use of Internet self-efficacy beliefs levels differ among the groups that having more than 5 years-experience and less than 1 year-experience; between 1-3 years and between 3-5 years.

.5. Findings about the Change of Teacher Candidates' Educational Use of Internet Self-Efficacy Beliefs According to Daily Internet Use Duration

The means related to teacher candidates educational use of Internet self-efficacy beliefs level according to daily Internet use duration are presented in Table 8.

Table8. Findings about the Change of Teacher Candidates' Educational Use of Internet Self-Efficacy Beliefs According to Daily Internet Use Duration

	Daily Internet Use Duration	N	\bar{X}	SS
1.	Less than 1 hour	143	88,42	21,82
2.	Between 1-4 hours	333	98,32	20,44
3.	Between 4-8 hours	89	103,80	21,21
4.	More than 8 hours	33	106,80	20,71
	Total	598	97,17	21,56

In Table 8, we see that the group having the highest educational use of Internet self-efficacy beliefs level are those who use the Internet more than 8 hours a day ($\bar{X}=106,80$), the group having the lowest educational use of Internet self-efficacy beliefs level are those who use the Internet less than 1 hour a day ($\bar{X}=88,42$). Moreover, it is understood that teacher candidates frequently use the Internet between 1-4 hours a day. The results of the variance analysis related to whether the mean of teacher candidates' educational use of Internet self-efficacy beliefs according to daily Internet use duration are given in Table 9.

Tablo9. Findings of Variance Analysis of Teacher Candidates' Educational Use of Internet Self-Efficacy Beliefs According to Daily Internet Use Duration.

Resource of Variance	Sum of Squares	Sd	Mean of Squares	F	P	Meaningful Difference
Inter-groups	17838,660	3	5946,220	13,594	.000	1-2, 1-3, 1-4
Intra-groups	259829,137	594	437,422			
Total	277667,797	597				

1: Less than 1 hour, 2: Between 1-4 hours, 3: Between 4-8 hours, 4: More than 8 hours

As a result of the variance analysis, we see that the difference between educational use of Internet self-efficacy beliefs levels is meaningful ($F(3-594)=13,594$; $p<0.01$). According to Bonferroni test conducted in order to identify which groups have meaningful difference, it is seen that educational use of Internet self-efficacy beliefs levels differs among teacher candidates using the Internet less than 1 hour a day, between 1-4 hours a day, 4-8 hours a day and more than 8 hours a day..

.6. Findings about the Change of Teacher Candidates' Educational Use of Internet Self-Efficacy Beliefs According to the Place They Get Online

The means related to teacher candidates' educational use of Internet self-efficacy beliefs according to the place they get online are presented in Table 10.

Table10 Findings about the Change of Teacher Candidates' Educational Use of Internet Self-Efficacy Beliefs According to the Place They Get Online

	The place they get online	N	\bar{X}	SS
1.	Home /Dormitory	540	97,42	21,22
2.	Cyber cafe	23	86,00	24,27
3.	School	11	97,88	15,70
	Total	574	96,98	21,34

According to Table 10, it is seen that educational use of Internet self-efficacy beliefs level are closer between the teacher candidates who get online at home/dormitory and at schools. On the other hand, most of the teacher

candidates get online where they stay. The results of variance analysis related to whether the difference between the means of teacher candidates' use of Internet self-efficacy beliefs are given in Table 11.

Table11. Findings of Variance Analysis of Teacher Candidates' Use of Internet Self-Efficacy Beliefs According to the Place They Get Online

Resource of the Variance	Sum of Squares	Sd	Mean of Squares	F	P	Meaningful Difference
Intergroups	2890,168	2	1445,084	3,196	,0426	1-3
Intragroups	258213,061	571	452,212			
Total	261103,229	573				

1: Home/Dormitory, 2: Cyber Cafe, 3: School

As a result of variance analysis, it is seen that the difference between candidates' use of internet self-efficacy beliefs levels according to the place they get online is meaningful ($F(2-571)=3,196$; $p<0.05$). According to the results of Bonferroni test conducted in order to see which groups have meaningful difference, there is a meaningful difference between teacher candidates who get online where they stay (home/dormitory) and teacher candidates who get online at school.

.7. Findings about the Change of Teacher Candidates' Educational Use of Internet Self-Efficacy Beliefs According to Whether They Desire to Take Their Lessons Online

Findings about the change of teacher candidates' educational use of internet self-efficacy beliefs according to whether they desire to take their lessons online are presented in Table 12.

Table12. Findings About the Change of Teacher Candidates' Educational Use of Internet Self-Efficacy Beliefs According to Whether They Desire to Take Their Lessons Online

Desiring to Take The Lessons Online		N	\bar{X}	SS	sd	T	P
Educational Use of Internet Self-Efficacy Beliefs	Yes	320	100,60	20,82	592	4,10	.000
	No	274	93,41	21,74			

When we analyze the Table 12, it is seen that there is a meaningful difference between teacher candidates' use of Internet self-efficacy beliefs according to desiring to take the lessons online ($t(2-592)=-4,10$; $p<0.01$). The teacher candidates who desire to take the lessons online having higher educational use of Internet self efficacy beliefs level than teacher candidates who do not desire.

Results and Discussion

It is seen that most of the teacher candidates have educational use of Internet self-efficacy beliefs and male teacher candidates have higher educational use of Internet self-efficacy beliefs. It is seen that the educational use of Internet self-efficacy beliefs of the students in the departments of Computer and Teaching Technologies and Science Teaching are high in a meaningful level. It is observed that when the duration of Internet increases, teacher candidates' Internet self-efficacy beliefs increase, too. On the other hand, teacher candidates who get online where they stay (home/dormitory) have a higher level of educational use of Internet self efficacy beliefs than teacher candidates getting online at school.

When the related literature is analyzed, it is possible to face similar results. In the researchers conducted on teacher candidates, it is seen that self-efficacy beliefs of male teacher candidates are higher than self-efficacy beliefs of female teacher candidates (Yenilmez et al., 2011; Kaya et al., 2014; Gündüz and Özdin., 2008).

Baş (2011) determined that primary school teachers have “quite sufficient” educational use of Internet self-efficacy beliefs. In another study, it was founded that physics teacher candidates have high levels of educational use of Internet self efficacy beliefs (Bozkurt et al., 2010). On the other hand, the students in the departments of Computer and Teaching Technologies and Science Teaching have higher educational use of Internet self-efficacy level than the students in other departments (Durmuş and Başarmak, 2014). On the contrary to the mentioned studies, Kaya et al., (2014) and Kılıç and Çakmak (2010) has founded the results that teacher candidates’ educational use of Internet self efficacy does not change according to their departments.

There is a meaningful difference among classroom teacher candidates’ educational use of Internet self efficacy according to type of learning, duration of Internet use, the classroom they take lessons, and the environment they get online (Tuncer and Özü, 2012). Yenilmez et al., 2011, who finds a similar result, mention that educational use of Internet self efficacy of teacher candidates who use Internet much are higher.

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Analyzing pre-service teachers' skill-level on summarizing informative texts

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Abstract

Since learners who can summarize a text learn informative texts better and also they can remember them, this skill should be taught in schools. In this process, teachers have a great responsibility. For this reason, in this study, these questions are wanted to be answered: what is the summarizing level of pre-service teachers?, Are there any differences between pre-service teachers on summarizing skill-level in terms of their disciplines, genders, reading habits and subscribing a consist magazine? The universe of this study was occupied by the learners who were attending "Pedagogical Formation Course" Program in Muğla Sıtkı Koçman University in Turkey in 2014. In this study, 'Maslow's Needs Hierarchy' (Şahin, 1983, p. 3-7) was selected as a natural and informative text for the learners in order that the learners summarize it. As a result of the data gathered from the study, it was seen that the summarizing skill-level of the pre-service teachers was in the middle level. That result was a promising finding for the pre-service teachers to help the learners on summarizing skill.

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Peer-review under responsibility of the Sakarya University.

Keywords: Pedagogical formation, summarizing, pre-service teachers, informative texts

Main text

The general point that is mentioned by teachers on teaching process is teaching learners how they can learn as using strategies and techniques designed for learning. For this reason, teachers should mainly concern with teaching the learning strategies. Learning strategies and using techniques of them should be acquired in practicum process because knowledge and skills that have been acquired in practicum process will be effective for pre-service teachers in their teaching lives. In this study, it is aimed to determine the level of pre-service teachers' summarizing skill that is one of the learning strategies. Summarizing technique basically used in this study is clarified under the title of interpretation strategies. (Erden and Akman, 1995, p. 156).

'Reading comprehension' is the keystone of school learning. Yet, reading comprehension is one of the learning skills that we cannot improve sufficiently (Tekin, 1980, p. 66). Bloom (1979, p. 48) states that school learning is based on reading comprehension capacity of learners. Studies in reading comprehension emphasize that there are some techniques in order to make reading comprehension easy and also these can be taught to learners (Pressley, Johnson, Symons, McGoldrick and Kurtia, 1989). One of these techniques is summarizing. Summarizing is highly significant for reading comprehension and remembering the key points. Studies conducted in this field (Day, 1980; Brown & Day, 1983; Rinehart, Stahl, & Erickson, 1986) clarify that summarizing is a teachable skill and it can improve reading comprehension and remembering abilities. Summarizing means that covering the text and representing the main points in a text. While summarizing, some unnecessary and extra points can be eliminated from the general text and a macro structure that consists of main points can be conducted. Meanwhile, teaching the summarizing skill means that helping learners on their reading comprehension process (Brown, Day & Jones 1983; Çıkrıkçı, 2012; Erdem, 2012; Karatay and Okur, 2012).

Summarizing is a skill that requires obeying some rules. Brown and Day (1983) have analyzed the summaries

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which have been written by children and adults as using a summarizing model suggested by Kintsch and Van Dijk (1978). As a result of the analyses, six summarizing rules have been determined (as cited in Garner and Hahn, 1985). Those rules are: 1) making short that given as a list, 2) cleaning the repeated sentences and just using one of them in the summary, 3) cleaning the unnecessary sentences, 4) selecting the important knowledge to use in the summary, 5) cleaning unrelated sentences, using topic sentences in the summary and 6) if there isn't any topic sentences, write a topic sentence. Those rules used in outlines have underpinned for some researches as being used in summarizing technique (Çakır, 1995; Çıkrıkçı 2008; Karatay and Okur, 2012). Kintsch and Van Dijk (1978) also claim that the rules mentioned here are not just some specific rules used for summarizing but rules that can be used to comprehend a text in general (as cited in Brown and Day, 1983).

Since learners who can summarize a text learn informative texts better and also they can remember them, this skill should be taught in schools. In this process, teachers have a great responsibility. Yet, first of all, determining the summarizing ability of pre-service teachers is important. For this reason, in this study, these questions are wanted to be answered: what is the summarizing level of pre-service teachers?, Are there any differences between pre-service teachers on summarizing skill-level in terms of their disciplines, genders, reading habits and subscribing a consist magazine?

Method

1. Participants

The universe of this study was occupied by the learners who were attending "Pedagogical Formation Course" Program in Muğla Sıtkı Koçman University in Turkey in 2014. Sample was conducted with totally 171 in some different departments such as 47 of those learners in Turkish Language and Literature Department, 38 of them in History Department, 38 learners in Mathematics Department, 23 in Physic Department and 25 learners in German Language Department. In this study, 103 of the learners were female and 68 of them were male.

2. Data collection instruments

Study Material; In this study, 'Maslow's Needs Hierarchy' (Şahin, 1983, p. 3-7) was selected as a natural and informative text for the learners in order that the learners summarize it. This text was consisting of 42 sentences and 526 words and also it was about psychology. Because the participants tick the summary answering form for each sentence that they decided to use in summary, all of the sentences in that text were numbered.

Summary Answering Form (SAF); This form was composed of two sections. In the first section, pre-service teachers were wanted to fulfill the information gaps about their disciplines, genders, read books for the last one year, whether they have subscribed to a magazine or not. In the second section, those pre-service teachers were wanted to select and tick the sentences that they decided to use in their summaries. Thanks to this section, pre-service teachers would decide the sentences which used in the summary. In order to get information about each participants' total points, those forms were pointed and those points were used as a summary point for each participant.

Summary Answer Key (SAK); For pointing the pre-service teachers, SAK was designed. As there was a natural text, it was impossible to use all of the summarizing process. In order to design SAK, these steps were followed: the researcher and two other experts in Education Programs and Teaching Department summarized the text as using summarizing process and rules. The situation of how many rules can be used in which sentences were determined. Therefore, the text was solved via summarizing rules. As a result of the analyses, the most frequently used rule was 'cleaning repeated sentences' for 10 times, the others were 'cleaning the unnecessary information' for 6 times, 'cleaning unrelated sentences' for 2 times, 'selecting important information' for 7 times and 'selecting topic sentences' for 7 times. For each correct answer (1) point, for each false answer or unanswered item (0) point was used. So, the highest point was 32 and as a result of this criterion, SAK was designed. Learner answering forms were pointed via SAK.

.3. Data analysis

The text used in this study was just suitable for selecting and cleaning rules of summarizing. For this reason, the pre-service teachers got (1) point for each correct answer and they got (0) point for each false answer. As counting the correct answers, there was a total point for each participant. Arithmetic mean for each form was calculated. In data analysis process, frequency, levene homogeneity test, t-test and variance analysis were used.

.4. Procedure

The text and SAF were delivered to pre-service teachers. They were wanted to complete SAF with the help of that instruction: "Firstly, carefully read the text in which each sentences are numbered. When you need to summarize this text, which sentences do you use in your summary? Which ones do you clean? Read the text again and just determine the sentences that can be useful for a summary. Write the numbers of determined sentences into your forms". So, each participant completed SAF as writing the numbers. Each SAF was compared with SAK and they were pointed. As in this way, the general points for each participant were determined.

Findings

In order to answer the question: "what is the summarizing skill-level of pre-service teachers?", arithmetic mean and standard deviation were calculated. As it can be seen in Table 1, general mean was \bar{X} : 19, standard deviation was Ss: 3. The learners got 1 more or less point on general mean were determined as normal(16;22); participants who were over this mean were determined as high (23;28) and participants being under this mean were determined as lower level (15;12). The descriptive statistics about the points of pre-service teachers were given in Table 1.

Table 1: The results of descriptive statistics about the summary points of pre-service teachers

N	\bar{X}	Ss	The lowest point	The highest point	Summary Skill-level					
					Low		Middle		High	
					N	%	N	%	N	%
171	19	3	12	28	23	13,5	128	74,9	20	11,7

As it can be seen in Table 1, it might be said that the summarizing level of the pre-service teachers was "normal (middle)" because most of the points of pre-service teachers were changed between 16-22 and that means "middle" level. 11, 7% of the group had "high" level, 13, 5% of the group had "low" level and 74, 9% of the group had "middle" level. As conclusion, 86, 6% of the pre-service teachers in the field of Turkish language and Literature, Mathematics, German Language and History had "middle" level and more than it in summarizing skill.

The question in this study was "Are there any differences between the pre-service teachers in terms of their disciplines?" and in order to answer this question, the general points of the pre-service teachers in different disciplines were used in this study. For this question, ANOVA was used to determine the difference on different disciplines. The results based on that analysis was given in Table 2.

Table 2: ANOVA results of the pre-service teachers on summarizing skill in terms of their disciplines

Group	N	\bar{X}	Ss	Sd	F	p
1- Turkish L.	47	19,38	3,2	4-166	.994	.413
2- History	38	18,13	3,3			
3- Physic	38	19,26	3,6			
4- German L.	23	19,44	2,9			
5- Mathematics	25	19,02	3,1			

p< .05

The summarizing skill points were (19, 38) for Turkish Language and Literature Department, (19, 44) for German Language, (19, 26) for Physic Department, (18, 13) for History Department and (19, 02) for Mathematics. As a result of the Table 2, there was no meaningful difference between different disciplines. In terms of that data, it could be said that the summarizing skill was similar for all disciplines in this study.

The other question in this study was “Are there and differences between the pre-service teachers on summarizing skill in terms of their genders?” and to answer this question Independent Samples t-test was used. The results were given in Table 3.

Table 3: The t-test results of the pre-service teachers on summarizing skill in terms of their genders

Gender	N	\bar{X}	Ss	Sd	t	p
1- Male	68	18,63	3,4	169	-1,262	.209
2- Female	103	19,27	3,1			

$p < .05$

The summarizing skill-level of the pre-service teachers were (18, 63) for male; (19, 27) for female participants. As a result of the Table 3, there was no meaningful difference between two genders in terms of summarizing skill.

The other question that has been wanted to be answered in this study was “Are there and differences between the pre-service teachers on summarizing skill in terms of their reading habits?” and to answer this question, the general points and the numbers of books that were read by the pre-service teachers were used. For this reason, One-Way ANOVA analysis was used and the results were given in Table 4.

Table 4: ANOVA results of the pre-service teachers on summarizing skill in terms of their reading habits

Frequency of Reading a book	N	\bar{X}	Ss	Sd	F	p
1. Never	7	17,42	4,5		.906	.462
2. 1-5	63	18,71	3,1			
3. 6-10	46	19,08	3,2	4-166		
4. 11-15	25	19,68	3,09			
5. 16 and more	30	19,36	3,1			

$p < .05$

The pre-service teacher who stated that they had never read books were in (17, 42 mean) points in summarizing, the pre-service teacher who stated that they had read 1-5 books were in (18, 71 mean) points, the pre-service teacher who stated that they had read 6-10 books were in (19, 08 mean) points, the pre-service teacher stated they had read 11-15 books were in (19, 68 mean) points, the pre-service teacher who stated that they had read 16 and more books were in (19, 36 mean) points.

As a result of the Table 4, when the reading habit frequency was going on over and over, the level of summarizing skill was increased, but nevertheless, there was no statistically mean difference between reading habit and summarizing skill. According to Table 4, it could be said that the reading habit frequency of the pre-service teachers was 6-10 books for each year.

The other question that has been wanted to be answered in this study was “Are there and differences between the pre-service teachers on summarizing skill in terms of their subscribing on a journal?” and to answer this question, the general points and the subscriptions of the pre-service teachers were used. For this reason, Independent Sample t-test was used and the results were given in Table 5.

Table 5: ANOVA results of the pre-service teachers on summarizing skill in terms of their subscription on a journal

Subscribing on a journal	N	\bar{X}	Ss	Sd	t	p
1- Yes	100	19,21	3,4	169	.919	.359
2- No	71	18,74	2,9			

$p < .05$

The summarizing skill-level of the pre-service teachers in terms of subscribing on a journal were (19, 21 mean)

points and there were (18, 74 mean) points participants who have not subscribed on a journal. As a result of the t-test, there was no meaningful difference on having a subscription on a journal in terms of summarizing skill.

Discussion and Conclusion

As a result of the data gathered from the study, it was seen that the summarizing skill-level of the pre-service teachers was in the middle level. That result was a promising finding for the pre-service teachers to help the learners on summarizing skill.

According to Haas and Graff (1981), "In a text, especially in a long text, as reproducing the context via summarizing is one of the most important clue of learning" (as cited in Çıkrıkçı, 2008). For this reason, having a summarizing ability gives a chance for the teachers in text-based learning. Summarizing is important for being gained and being used both reading/listening skills and writing/speaking skills. So, this point states that summarizing skill should be acquired to the learners (Ülper and Karagül, 2010).

In terms of that data collected in the study, it was stated that the summarizing skill was similar for all disciplines and there was no mean difference between different disciplines. According to that result, it could be said that the pre-service teachers who were graduated from a university have had summarizing ability independent from their disciplines. Also, even if there was no mean difference, the pre-service teachers in Turkish Language and Literature Department and German Language Department had more points than the others.

As a result of the study, female participants had more successful than male participants on summarizing skill, yet there was no meaningful difference between two genders.

It was determined that there was no mean difference between reading habits and summarizing skill-level of the pre-service teachers. That result could be reasoned because the participants were newly graduated from the university, there was no lesson-book on the questionnaire or it could be because it was asked just the books that have been read in the last one year. Also, as a result of this conclusion, it could be said that not the numbers of books read by the teachers but the learning style was more important for the summarizing skill. Additionally, getting summarizing skill has been a long process and it should be started in primary or secondary school. The studies on reading habits showed that the pre-service teachers have had middle level (6-10 books) on their reading habits in just one year (Yılmaz, 2006; Karatay, 2007).

Finally, there was no mean difference on summarizing skill-level and having a subscription on a journal. But it was seen that the general points of the participants who had a subscription had more points than the others. In the studies conducted on this field stated that there was a relationship between having a subscription on a journal related their disciplines, the level of using reading strategies and individual awareness on this field (Karatay, 2007; Özbay, Bağcı and Uyar, 2008; Çiftçili, 2008).

Recommendations

The reading habits of the participants were limited just one year, instead of that it could be designed to get more information the participants reading habits.

In other studies, different disciplines can be compared as using summarizing rules on application level.

In order to develop the summarizing skill-level of the pre-service teachers, lesson contexts should be organized and there should be some different activities that can give a chance to summarize texts.

There should be some seminar for the pre-service teacher on reading comprehension.

It can be suitable to be designed the linguistic courses as an applied format in all degrees on the formal education when the relationship between writing and summarizing was considered in detail.

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Ancient history education in Turkey and ancient east-west concepts in ancient historiography

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Abstract

God centered outlook on human of Medieval Age in Europe has given way to human centered humanistic view since the XIV th century along with Renaissance. Developments in scientific understanding began to emerge by this outlook. History is the scientific field which was affected by these developments. These developments aroused interest and admiration to Ancient Greek and Roman Civilizations and expedited the studies on history. When the studies focused on this direction, the concept of Ancient History emerged as a result of departmentalization of History science in the XIX th century and this concept was identified with history of Greece and Rome. By this sense, Greece and Rome were acknowledged and admired more. But archaeological excavations conducted in Middle East since the XVIII th century revealed Ancient East concept at the beginning of XX th century. Are these concepts sufficient to comprehend Ancient World? Or, should new concepts comprising other regions of the World be formed?

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Peer-review under responsibility of the Sakarya University.

Keywords: Ancient, Historiography, History, West, East, Turkey

1. Ancient History and Its Historiography

“Ancient history is never anything other than and never should be anything other than a part of one, universal history; and both ancient and modern historians ought never forget that” Edward Meyer (Bengtson, 1971).

Today, while it is discussed whether History studies are of the branches of science or not, it can be said that there has been some developments in terms of methods of work and issues since the XIX th Century.

Historians of the XIXth century accepted the date of the first Olympic Games as 476 BC. However in the beginning of the XIX th Century Mesopotamian civilizations and their connection with the roots of Greek-Roman civilizations were discovered and 3000 BC was accepted as the beginning of Ancient History, the end of Ancient History was accepted as the fall of the Western Roman Empire. The dates that follow the ancient history were taken into account according to interest of Europe.

This region from Adriatic to Indus, which was the habitat of Greek and Roman civilizations, often remained limited with the Rome's eastern border the Caucasus. Perception of the ancient world limited to the geographical and cultural boundaries of Europe seems to be essential in determining the current borders. At the same time this limitation shows that the foundations of contemporary European civilization began to be shaped thousands of years ago in ancient time .

2. Historiography from Ottoman Empire to Republic of Turkey

Europe which has dominated political world since the XIX th Century shows its effect on cultural aspects today. Selim III. who ascended the throne in 1789 at the same time with the French Revolution, gave the first signal of Westernization with the foundation of Nizam-i-Jadid Army. Then in the reign of Mahmut II in 1839, with the Tanzimat Edict, reforms were initiated in the Western sense. Westernization and constitutional studies in 1876 revealed important steps towards political change. Correspondingly to these developments European sympathizers called coterie of the Young Turks intellectuals has emerged in the world of culture .

With the establishment of the Grand National Assembly of Turkey in 23 April 1920 and the proclamation of the Republic in 29 October 1923, Turkey was reborn like a phoenix bird peeling off the ashes from the Ottoman Empire. In political terms, Republic of Turkey fighting for independence against the Western States made many breakthrough drawing samples of Western values. One of the most important pillars of this change has been at the point of establishing the historiography wanting to hold deep-rooted connection to the past and future of the state. Undoubtedly, the domestic and foreign authors who ignited studies on this subject had the perspective of insulting the Turks.

Afet İnan, tells that Atatürk started the project of "Turkish History Thesis" after she had shared the information showing Turks from yellow race and describing them as barbarians in geography textbooks in the French High School in Turkey in 1928. Understanding of history at the early years of Turkish Republic mainly concentrate on the origins of Turkish race. Because of the Europeans who dominated the world formed a classification system that shows Indo-European white race as the master race. In Turkey, according to the classification in geography course books, the first group was the white race; second group was the yellow race. The black race was the third group. Turks, who were shown as barbarians, were in the same group with the Mongols and Chinese (İnan, 1944).

Ottoman intellectual's perspective was not much more different than this. One of them is the evaluation of Abdurrahman Şeref who served as the state's official chronicler until the abolition of the sultanate in 1922. He stated that "*Turks did not leave any material culture works since they do not have the ability to leave the works of civilizations. That's why they were doomed to China in the east and Islamic civilization in the west.*" (Yücel, 1944).

As a reaction to this kind of thinking, Atatürk focused on Turks role in World domination from 1929. He launched a new era of historical research by having new books brought in 1930, and aroused a great interest in Turkish History among the statesmen and scientists.

3. Atatürk and the Turkish History Thesis

The Turkish people who rose again like a phoenix from the ashes of Ottoman Empire after the wars of Independence and World War I were not going to question their position in the world. However, Mustafa Kemal attracted attention at the battles of Çanakkale was distinguished as a leader during the transition term from the empire to the republic.

Although he preferred the state's science policy as a national education policy returning to the essence of people since the establishment of the Republic on 29 October 1923, over the time, he supported a secular science policy integrated with the world. One of the most important steps of these policies was to reveal the historical identity of the Turkish nation to move towards modern civilization with the nation provided confidence. As well as many innovations made in this regard, from 1928 a series of activities like the establishment of Turkish Historical Society and the Turkish Language Institution and the opening of the Faculty of Language, History and Geography in order to support "History thesis considering Central Asia as a source and current Turkey as the main homeland." as in the words of H. Ali Yücel (Yücel, 1944) and "Sun Language Theory" were carried out (İnan, 1944).

It couldn't be enough to open these institutions. Many young who would serve in these institutions were sent abroad for the education in the fields of History, Language, and Archeology. Initially, national history overview was put as a response to the west, eventually joint works were conducted with the foreign scientists who received training from abroad and working in the country.

4. Ancient History and Archaeology Studies in Turkey

Many archaeological researches and excavations in the country have revealed many unknown in

Anatolian history. Hundreds of excavation camps and museums were established in a ninety year of period. A portion of the works which were plundered and carried abroad by the western researches whether illegally or by agreements was brought back into the country. However, it is still a fact that the presence of findings of Turkey in the foreign countries which were found during the excavations by treasure hunters.

All of these activities has accelerated the integration of Ancient historians and archaeologists with ‘‘Western Thought’’ more than the other scientific fields. On the other hand, this process of working together has led to more recognition and promotion of our country by foreigners. Çatalhöyük, Göbekli Tepe, and Boğazköy are some of them. After the establishment of the Turkish History Investigation Society in 1931, archaeological surveys and excavations were initiated in 1933. Şevket Aziz Kansu, Hamit Zubeyr Koşay and Remzi Oğuz Arık made a priority in these activities,. The first 10 years of these studies had more national character, and then by the arrival of German Jews as refugees during the World War II these researches were conducted in cooperation with these German Researchers and other foreigners. As a result of this cooperation these researches had gain a western character. Admittedly this change occurred by the effect of scientists sent to the West for education .

However, despite these positive developments, some problems have occurred in our Ancient historiography in recent years, such as other social sciences. There are 180 universities in Turkey in early 2014. But it is useless to have the same school curriculum within all the university departments as secondary and high schools of Ministry of Education. And it is unrecoverable to found every field of science departments at the universities in Turkey and in the other countries as well.

In the world’s developed countries each university distinguish in a different science field and in different parts of the world. If a Philosophy department is successful in a university for example History is prominent in the other university, other universities have major science departments like this. While a university focuses on Africa in the field of social sciences, another university concentrates its researches on Asia. This situation is changing even according to the country. While Anthropology goes forward in a country, Philosophy is in another one. If it is targeted to go forward in all fields of science in all 180 universities, these fields are going to be conducted superficially.

Therefore, the great universities in our country, such as Istanbul and Ankara can work by opening of the institutes about every region of the world. However, if İstanbul University could study on the subjects of history, archaeology, geography, sociology, literature and language issues of Europe, Ankara University on America, Trakya University on the Balkans, Kafkas University which is in Kars on Caucasia, Erzurum Atatürk University on Central Asia, Çukurova University on Eastern Mediterranean, Dicle University on Iran and Harran University on Mesopotamia, Selçuk University on Anatolia, Iran and Turkmenistan, Antalya Akdeniz University on Mediterranean region it would be easier to produce joint projects between different discipline of these universities.

Trying to create a common curriculum in all universities like secondary education in our country makes the subjects superficial and unproductive. Ancient studies are also conducted in our country in this way.

5. Understanding of Ancient History and Historiography in Turkey

It can be said that there is still an understanding of ancient concept described with the XIX th century Greek and Roman world’s boundaries in Ancient Historiography. One of the discussions and the problems on this issue is to try to see the understanding of civilized in the west and barbarians in the east which took Aegean world the center in ancient times in the discipline of history. Certainly every man sees himself in the center. The Babylonians saw the Babylonia as the center of the world, while the borders of the easterners and westerners were Euphrates. For the ancient Greeks, it was the Aegean Sea. The west of this sea was the West; the east of it was the East. Already the meaning of Anatolia comes from the ancient Greek language the ‘‘direction where the sun rises’’ which means ‘‘Anatolia’’. While the Romans also saw their city of Rome as the center, they called the east of the city as Orient in the East and the west of it as the Occident. They separated the empire as east and west from Illyria (Dalmatian Adriatic environment). East Romans (Byzantium) and Ottomans would see İstanbul as the center. Boundaries of the East and the West were constituted by the straits for them. Right now, this area is our borders that we perceive as the wes-east.

In the Old West and Old East discrimination in Ancient historiography; the area in the old west historiography is rather ancient Italy, Greece and Western Anatolia which is Greek and Roman world; and in the old East the area is Tigris and Euphrates River Basin known as Mesopotamia and their subjects of study are the

cultures of these regions. While the civilizations like Hittite, Urartu, Phrygia and Lydia which were located in the middle of this area in Anatolia are considered in the Ancient East, Greek and Roman civilizations in the same geography are seen in the Ancient West. It is expected from the experts who work on Ancient History to focus on these areas either in West or East.

However especially like in Central Anatolian mounds the findings of Hittite, Phrygia, Lydia, Persia and Urartu which are considered as Eastern could intertwine with Greece and Roman thought as Western. It is difficult to define these cultures without studying both worlds comparatively. Thus, an archaeologist working only Classical period can say Hittite painted pottery as Greek or on the contrary, the one working Hittite pottery may say otherwise. In addition it is expected from Ancient History experts to work only on ancient languages like a philologist. However, at this point it is faced with the question of on which old language used in Anatolia should be worked. From which of the languages? Hittite, Luwian, the Hurrian, the Urartian, Greek, Latin etc.? Certainly he should prefer the one used in the study area. The desire to learn the pottery and architecture of Hittite for a researcher is very normal if s/he is conducting the research in a Hittite area. It should not be a priority to want to study Urartu or Mesopotamian art for a researcher of a Hittite region (Akurgal, 1988, Bahar, 2010).

6. Conclusions

As a result; currently, it can be said that our outlook on the world and historiography is based on that of Europeans, but we limit to Aegean world which separates Greek and Barbarians with the limits set by Herodotus on Ancient Historiography. Moreover, in his historiography there are large lectures from Scythia, Ethiopia and India which are the world of Barbarians (Herodotus, I.)

Certainly, such a Eurocentric perspective will lead the civilizations in another world outside the civilization descendants of Europe or Greek and Roman to remain in darkness. But it should be noted that world civilization is a common product of all people.

Is not the reflections of this partnership that is being known the presence of people in Ethiopia in the east of the Central Africa, approximately 3.5 million years ago, stepping towards to technology with the earliest stone tools again in this area of Oldowia in Tanzania, emergence of writing in Mesopotamia, rice and gunpowder in China, wheat in Palestine, the first temple in Urfa Göbekli Tepe in Turkey and the first city in Çatalhöyük and the products such as maize, tomato and potato in America?.

In my opinion that it should be passed on History and Ancient Historiography with an understanding of science approaching multi-centered cultures instead of a single-center and single-subject studies, considering human as human in all over the world and based on the interaction between cultures, comparing culture from past to future vertically and with its neighbors horizontally.

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APPLIED EDUCATION AND CASE STUDY PROBLEM IN LAW EDUCATION

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Abstract

Law is a science of living. Therefore law must adapt to itself according to the changing needs and must find solutions to the problems of the people living on that day. The law rules and the problems faced by people in practice cannot be separated from each other. Thus the law is successful to the extent that solves the problems of people living in the community.

Law education is also successful to the extent that gives place the legal problems faced by people in practice. Therefore, in legal education, besides theoretical knowledge to practical problems and case studies should be included. However, in law education, it is not possible to say that applied education and case studies is included enough. There are various reasons of this condition.

This study titled “Applied Education and Case Study Problem in Law Education” is prepared so as to examine the reasons why applied education and case study is not included enough in law education.

Key words: Law Education, Applied Education, Case Study

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Application of e-learning in foreign language teaching at the technical university

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Abstract

The paper tries to evaluate the work of the research team at the Department of Humanities and the Department of Manufacturing Management at Technical University. In accordance with the timetable of the project, we come to understand the most appropriate methodology in the teaching of professional foreign language material and equally important part of implementing and achieving the objectives of the project and the preparation of the most suitable study material for courses at the Technical university (Faculty of Manufacturing Technologies).

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Peer-review under responsibility of the Sakarya University.

Keywords: e-learning; blended learning; foreign language courses;

1. Introduction

Many schools have long figured out that the Internet can be a powerful ally in teaching almost within each subject. Those who know its power use, offer online courses not only as a supplement to the current study, but as a full form of education for specific groups. Not only for students of full-time or part-time, for example, but also for people who cannot be released at the regular time or they prefer self-study at a time of their own choice. For this group, the school has undeniable advantages over the internet. If the development of the Internet and information and communication technologies will evolve at a rapid pace, maybe a few years almost all courses will via the Internet. The quality of online education is increased by an alarming rate, and e-learning, as it can be said says otherwise, seriously competes with formal academic institutions. In this context, Katarína Bukerová recalls the history of online study finds that such training has its roots in Britain. Open University, which aims to further adult education and distance learning, is among the students currently the most popular universities in the UK. While offering online study (before the era were correspondence courses), it does not lag behind other academic institutions (Bukerová, 2014). She states that the Open University was the vanguard of a new type of online learning, which in recent years is gaining momentum. It is hiding under English acronym MOOC - Massive open online courses, or multiple open online courses. Even if the English word "mass" in this case is more marked.

Along with the beginning of the Internet first started talking about the revolution and later about evolution in education. In the early stages, it was assumed that the classical method of education will be completely replaced by another, an electronic. With time, started developing learning management systems under different names: learning through the Internet (Internet Based Training, IBT) Online Education (Online Learning). Currently, we are talking mainly about the management systems (management) teaching of English LMS Learning Management

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System. However, in Slovakia online education is still "in its infancy". Many schools offer it, but only as a component to the day or part-time, but in the U.S. it is much more popular. Its use and work with it, almost everyone of the students finds that online education is more challenging, because you need time to organize themselves and make the join in the discussion. We also say that from the subject know more, since assignments are really pushing to study almost every topic. It suggests that, as in the classroom, and online success rate rises and falls on particular teacher. True, provided that the school has created a workable system. I believe that flexibility of online learning suits students, as well as any teacher. However, it is difficult that the teacher has read all the posts from all students, then he must often send feedback to students for screen still felt human being (Bukerová, 2014).

2. Evaluation of the research team

In this context, I will try to evaluate the previous work of the research team of the Department of Humanities and the Department of Manufacturing Management within the KEGA (Cultural and Educational Grant Agency) project "Application of e-learning in foreign language teaching at the Faculty of Manufacturing Technologies". The main objective of the project was to develop the concept of foreign language learning through the implementation of the Common European Framework of Reference for languages (English, German, Russian) especially in teaching vocational technical language using e-learning as a complementary form of teaching. Another target of the activities of the project team was to prepare a methodology and appropriate study materials for specialized technical language in the context of foreign language courses and foreign languages in technical practice. According to the author such a form of education develops existing knowledge or improves known methods and procedures. It also allows teachers and students to find each other electronically, given form and pass the award tasks, evaluate students' work, to discuss selected topics, conducting surveys, develop student motivation, and the like. One of the objectives of the project will be making, implementation and knowledge from vocational technical language for the widest possible group of students, where appropriate, other potential bidders under the instruction of professional foreign language university-wide use of the Internet platform Moodle. E - learning can thus be defined as a system of education with the central role of the learner, which is used for the creation and delivery of content, activities, problem solving, evaluation, communication, administration and management of e-learning methods for the processing, transmission and storage of information. Thus, the aim is not to create a system that do not use the traditional education classes, but a system that would best suit the requirements of students and ensure the highest quality of education.

In accordance with the timetable of the project, we come to understand the most appropriate methodology in the teaching of professional foreign language material and equally important part of implementing and achieving the objectives of the project and the preparation of the most suitable study material for courses at the Faculty of Manufacturing Technologies. When teaching foreign languages continue to collect and compile the appropriate training material in printed form, or USB. We also began to prepare professional foreign language study material for the technical implementation of further work in the project. When teaching foreign languages (project coordinators) continue intensive studies appropriate foreign literature needed to prepare a special foreign language training materials and exercises in preparation for creating individual parts for e-learning and blended learning within it (Bielousova and Gluchmanova, 2011; Glendinning, 2007). At that time, preparations are continuing for the technical implementation and training with a particular vocational foreign language text. In this phase of the project foreign language lecturers must cooperate more closely with experts on the technical implementation of the project that started using e-learning as a complementary form of blended learning model - the so-called. blended learning.

In cooperation with the Faculty of Manufacturing Technologies technicians and experts for the technical implementation of the project, we installed new powerful desktop computers and monitors within multimedia classrooms for teaching foreign languages that students can effectively use this classroom not only for initial testing of processed and prepared various topics in English, German and Russian languages, but also in the future use the platform Moodle for foreign language learning. Windows Server 2012 and Windows versions call were installed in the technical implementation of the project in a multimedia classroom language for HP ProLiant server computer. After installation, they create a folder that can store files available on the Internet and launch the site. Officially, we have registered the domain name for the smooth running of the site <http://www.dot.tk>.

Subsequently experts provided technical realization of interconnection domain and server. We are currently working on creation of the web site by writing command lines consisting of nine sub in Slovak and three foreign languages - English, German and Russian.

Coordinators of the project were selected the most appropriate professional texts for upcoming topics based on the study of the literature and consultation with representatives of specialized departments. Gradually they began preparatory work for the implementation of an Internet module and in mutual consultation with experts on the technical implementation of the initial work carried out under the technical implementation. After meetings and grant agreement investigators tasks with individual representatives for accredited courses and programmes at the Faculty of Manufacturing Technologies in Presov, we have chosen and wrote part of the best themes for complementary form of teaching in the bachelor's and engineer's study. We took while on the needs of their future career development and the possible application not only in the domestic but also foreign labor market. Within each topic foreign language lecturers (project coordinators) created the tasks of motivation, the activation of associations, and previous experience and knowledge on the subject, the next stage is trying to present the topic, as well as create tasks and exercises on semantic, understanding, reproduction and production, depending on the language level of the students. The last phase is focused on communicative grammar and practicing it. I consider, therefore, that within the technical implementation of the most important in addressing the project included the mere installation of Windows Server 2012, create the root directory accessible for launching the website, as well as overall creation and operation of the multifunctional language classrooms, domain registration, domain and server connection, linking web pages with university-wide LMS MOODLE, and even the creation of web pages.

The work of foreign languages teachers - project coordinators on preparation of dissemination seminar for foreign language teachers from secondary vocational schools within the Presov region could be expected to the important results of the project solution for a given period. Project coordinators presented the results achieved so far work on the running project. In the last phase of the project language lecturers will be working on the final layout and select those themes in the English, German and Russian language in the undergraduate bachelor and engineering study. Within each selected topics language, speech-language and communicative exercises will be processed and preferred. The methodology exercises focus attention on reading and understanding of the text and thus subsequently referred through appropriate exercises - exercises for understanding, reproduction, reproductive-productive exercises and exercises to develop freedom of expression. They also seek that students and graduates of the Technical University were able to understand and work effectively with professional foreign language text. The student thus learns to make decisions, and is responsible for his selection. In doing so, his computer skills and speech as well as socio-cultural competences are formed. Such a mixed model of teaching is part of the concept of modern education. All-trained foreign language technical texts and exercises will be implemented within the planned project outputs and tested during the semester with students for whom this project is also being prepared.

The testing prospective student is registered. He will choose his courses and he is able to start. He may or may not watch all the parts and make all entries from the teacher. However, if he wants to complete a course successfully, he must meet specified requirements. The course is supported by extensive Internet resources, including topical issues and specific assignments, which are organized and prepared by teacher. The tests will be used to get feedback from students. On this basis, we learn how to understand the topics being studied, which makes them the most problems. On the other hand, computer controlled tests enable trainers partial relief from manual and repetitive work. Although computer controlled tests are not a panacea, I suppose that we can use them to improve the knowledge of students using the so-called. self-tests (whether assessed or not), or to verify their knowledge. Activity allows the teacher to design and set tests, which can consist of several types of questions. The questions are stored in the database and can be used in different courses. Multiple attempts are allowed, each of which is remembered. Tests can thus allow multiple attempts. Each is evaluated and the teacher can choose whether to show correct answers or indicate what the response was incorrect. Unlike tests on paper, which must be manually evaluated in electronic test, the teacher can concentrate on other options. Test can be used either as a means of students self-learning by allowing them to develop a test more than once, or as a brief recapitulation of the curriculum, etc.

Tests have many different settings, and thus it is possible to make them diverse educational goals. Computer-assisted testing has its advantages and disadvantages. The idea is that the teacher does not have to concentrate on demanding correction of tests, elimination of errors in the numerator and the like. On the other hand, if he really wants to make the most of computer support, often has to regret some types of test questions, which are difficult to implement. To some points that should be kept in mind, such as: Questions should relate to the objectives to be achieved rate. For the most important topics of the course it is appropriate to have a number of questions, each exploring a different aspect of the topic. Questions should also be simple or complex and should be targeted to applications in the issue. In questions with multiple answers wrong answers should be logically derivable from some often incorrect assumption. It is better to use more test questions so that it fills the time needed for the development. Thus, risk of depreciation and other activities that are not related to the test are reduced. There are many strategies that affect safety tests. The easiest way is to have students in a computer lab, which are controlled by teachers or cameras. However, if students are allowed to work out the test at home or anywhere, it can be developed with a friend or a textbook. There is no perfect strategy which could prevent this phenomenon. One option is to set up the test so that it can be done only once in a given small time window and a time limit, the questions will be selected at random from a larger database. So happens that the friend will have to develop his questions and he will not have time to help (Tomlinson, 2011).

In this context, networking websites with university-wide LMS Moodle and creating courses and tests in three languages - English, German and Russian has been the benefit to students and also the project leaders of the e-learning in language teaching at the Faculty of Manufacturing Technologies. At present, under the project I expect greater cooperation of foreign languages teachers with experts and technicians. They will operate with specialized texts and exercises to enter them into the system to use e-learning as a supplementary forms and methods of foreign language teaching Moodle platform. If necessary, training for teachers of foreign languages in the proper handling of the new platform and testing the new platform for the needs of the educational process will continue.

The completion of the e-learning within each specialized texts should be the result of the project. The obtained materials added to the Moodle platform then will be accessible to all students of bachelor's and engineer's study at the Faculty of Manufacturing Technologies. We will implement the concrete results of our work in the learning process and the upcoming seminars for high school foreign languages teachers within the dissemination of the results. When teaching foreign languages thus finalizing work with the selected foreign language and specialized texts during the semester will be also tested with students. They make adjustments in assignments after finding ambiguities and shortcomings continuously. Or if there are any technical problems, they solve them with experts on technical implementation. We expect to conclude the work with themes and exercises in the foreseeable future. So after adjustments by testing they will be appropriate supplementary materials for all students of bachelor and engineer degrees in individual study programmes and branches. Students will be introduced to a different foreign language texts and prepared tasks, whether the exercises during the semester by testing.

Within the foreign language technical text the specialist researchers focused on topics suitable for accredited study branches at the Faculty of Manufacturing Technologies in Presov: Manufacturing Technology, Manufacturing Engineering, Process Technology, Engineering Technologies and Materials, Industrial Engineering, and within those fields of study for study programs: Manufacturing Technology, Computer Aided Manufacturing Technologies, Industrial Technologies Operations, Manufacturing Management and Production Management, Designing of Technical Devices, Monitoring and Diagnostics of Technical Equipment, Process Equipment and Industrial Process Control.

Therefore, we added the appropriate technical study material from English texts on topics such as job application, in which we prepared to exercise typical language for talking about their work, the most used questions asked during the interview, English work on the narrative on deadline (closures), memos to employees, how to write a report, an apology or complaint letter. I suppose that currently very topical are global environmental problems in which we focused on issues close to material recycling and combustion inclusion. Given the above study programmes we could not forget about topics related to computers and the Internet, which we introduced and clarified issues - CIM, CAD, CAM, CNC. Attention was also focused on the language of computers and related formal and informal emails, complimentary language used in emails, formulation of

invitations and responses to the mail. Similarly, we included here the Internet terminology, social networks, as well as we clarified the purpose and role of the concept of netiquette. Within the explanation of certain functions of the machinery we tried to point out the different types of gears and their operations, as well as methods of joining parts together through exercises. Technical materials are equally important. We examined the physical and mechanical properties of materials, plastics and nanomaterials by studying of the current issue, and then we added the correct videos or exercises. To the manufacturing process is dedicated rather extensive section. Within the traditional manufacturing processes, we approached to students drilling, milling and milling cutters, turning, cutting, grinding and shaping. Progressive manufacturing processes include, for example, electrical discharge machining, laser beam machining, electron beam machining, water jet machining, abrasive water jet cutting and hydroforming. I consider that every student of manufacturing management study programme should control issues related to their field. Therefore, they have an opportunity to become familiar with technical terminology and basic information about the company, company structure and business ethics through the appropriate technical foreign language texts. Within management they should master the concepts and the related issues related to knowledge management, change management, and financial management. Similarly, topics on which they should understand how different is leadership and management, or marketing and sales are offered to the students. Marketing strategy, direct marketing, market research and implementation, and customer service are just as much bearing on the themes in already mentioned study programme, so we have prepared a rich offer of testing exercises in the context where they have the opportunity to study and verify their knowledge of the above technical terminology. Similar issues are solved by students also within the German and Russian technical text and language.

3. Conclusion

The website for all students of bachelor and engineering study will be accessible after completing the formation of the individual courses. This page will be intensively used as a complementary form of teaching during the semester not only internal but also external students. These issues will also be available for doctoral students or other teachers of technical subject. I suggest that in the context of dissemination of these issues the workshops for language teachers from secondary vocational schools will be also included. We will emphasize the need to work with a professional foreign language texts during the course, because their students are actually potential listeners of the Technical University, which includes the Faculty Manufacturing Technologies in Presov. Teachers will be familiar with the prepared methodical-didactic processing of various foreign language topics.

Moodle thus provides a large amount of resources and opportunities that we can create a modern and efficient e-learning courses. As each sector of activity, the educational process uses information and communication technologies. The task of learning environments are particularly educational objectives and feedback from students. Educational objectives are defined by courses and teachers, not by students, who must expend effort to achieve them. The feedback is even more important. It shows to students how to move forward, where are their weaknesses, because if they did not receive feedback, then they cannot find if they are close or not close to achieving the educational goals.

Acknowledgements

This paper is supported by KEGA, contract No. 013TUKE-4/2012 „Application of E-learning in Foreign Language Teaching at the Faculty of Manufacturing Technologies.“

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INTE 2014

Approaching youngs to unified theories: the charm of string theories

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Abstract

In this paper a pedagogical introduction to some key concepts of the process of unification in modern physics is presented. Starting by the notions of space and time, so important in the history of the human thought and at philosophical level, the paper comes to the peculiar aspects of the current string theories, with indications for the teaching of this charming topics by primary school. Interesting considerations, emerging by the fascinating connections of these theories with topics such as the extra-dimensions, will be also done.

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Peer-review under responsibility of the Sakarya University.

Keywords: Pedagogy; Education; Space; Time; Geometry; Physics; Unification.

Introduction

Albert Einstein devoted the last thirty years of his life searching the so-called “unified field theory”, i.e. the theory that was supposed to unify the laws of gravity and electromagnetism, in order to allow a complete description of natural phenomena. His plan failed, but in no case it could be successful, because at that time there were many gaps in knowledge relating to the physical world. When Einstein embarked on his attempt of unification, only three elementary particles (electron, proton and photon) were known and only two fundamental interactions, electromagnetism and gravitation; the weak and strong nuclear forces were not yet been discovered (Di Sia, 2000).

Currently the elementary particles are more than a hundred. The fundamental forces are today four and their unification has become one of the central objectives of the present scientific research. The methods of investigation had a clear progress, but on fact the unification of gravity with the other three forces has not yet been satisfactorily realized. Physicists, however, believe that the right direction leading to the formulation of a final complete theory has been taken. Currently the two followed main ways are:

- the superstring theory;
- the quantum gravity (Rovelli, 2010).

In this work we will consider the first way.

Space, time and theory of relativity

Modern physics has born through two great revolutions: the quantum theory and the theory of relativity. The “special theory of relativity” appeared in 1905 in order to reconcile the apparent contradiction between the motion of material bodies and the propagation of electromagnetic phenomena. Its creator Albert Einstein replaced the concepts of “absolute space” and “absolute time” with the concept of “space-time”. Space and time remain two

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different types of quantities and are treated differently in the equations of relativity, but their connection exists and have deep and fascinating consequences.

Einstein proved that time is “elastic”; the motion can determine the expansion or contraction of it. Each observer has its own time scale, which in general does not agree with those of others. The temporal variation increases for the value of the speed tending to the speed of light. In 1908, a few years before completing the “general theory of relativity”, Einstein assumed that gravity would change the rhythm of watches. The time depends on the place where a person is located, the rhythm of a clock is slower on the Earth’s surface than on a plane flying at high altitude, where gravity is weaker.

Even space is elastic as time. The absolute simultaneity of events loses all meaning. The presence of the mass, which creates gravitational field, determines the curvature; the variability of the curvature indicates the “euclidean” of the geometrical structure of space-time. The German theorist Karl Schwarzschild formulated the modern concept of “black hole”, used for understanding the key features of Einstein’s theory. A black hole is a region of space where gravity is so intense that nothing, not even the light, escapes from it. So all external objects tend to fall toward the black hole (Einstein, 2013).

Considering the relationship between gravity and space-time, we can consider a black hole as surrounded by “layers of time”, where the time moves at a different rhythm. These layers also exist on earth, even if the difference between the bottom of the oceans and the highest peaks of the mountains is too small to give macroscopic evidence of this phenomenon. However, experiments with atomic clocks have occurred in every detail that situation. The experiments verified that the layers of time around a massive body are real.

In general relativity, gravity is therefore “distorting” the geometry of space-time. The space is no longer “flat”, but “curved”. Where the force of gravity increases, time slows down and vice versa. In some stars the gravity is strong enough to lead to a significant slowing of time (Di Sia, 2014) (Fig. 1).

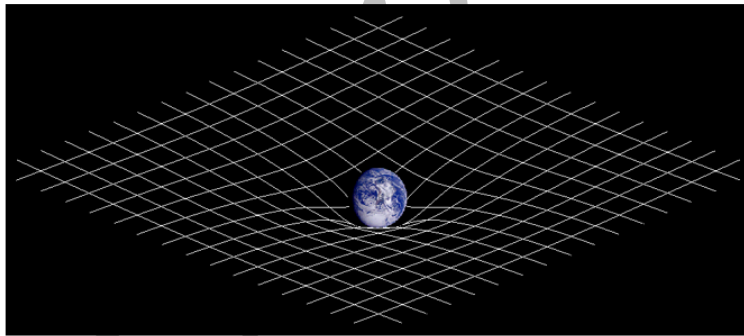


Fig. 1. A representation of the curvature of space-time due to the presence of a mass, represented in this case by the Earth.

This implies the separation from some concepts, such as the concepts of the “now”, which has not more a universal value. If two events, which take place in different places, appear simultaneous to an observer, may not appear so to other observers, without falling into a paradox.

With the non-Euclidean geometries the ideas of a “natural space” and “significantly evident space” fall; the line of continuity between “theory” and “sensitive evidence” breaks down.

The theory of relativity has not only radically challenged our images of “space”, “time”, “motion”, “matter”, by introducing a new image of the world, but it has been developed by general principles and therefore is particularly similar to philosophy (Di Sia, 2010 - Di Sia, 2013 - Di Sia, 2014).

The theory of superstrings

Modern physics is based on two pillars:

- Albert Einstein’s general relativity, which explains very well the behaviour of big objects (stars, galaxies, clusters of galaxies, etc.) present in the universe;

- Quantum mechanics, whose initiator was Max Planck, provides the knowledge of the atomic and subatomic world (molecules, atoms, electrons, quarks, etc.).

These two theories enabled a remarkable progress of physics in the last century, but present however a big problem: they are not mutually compatible.

Physicists can avoid often this incompatibility, because the field of investigation of the two theories is very different:

- when there is the need of studying small and light objects, quantum mechanics is used, without worrying about what relativity says;

- when there is the need of studying large and heavy objects, the laws of general relativity are used, without consideration on the other theory.

In recent years the situation has changed; the study of particular objects in the universe, such as “black holes”, which are heavy but have also quantum characteristics, requires the simultaneous application of the two theories (Di Sia, 2001).

The various attempts for building a unified theory, which take into account all forces of Nature, led to the theory of superstrings, able to reconcile quantum mechanics with general relativity. It would explain the behaviour of matter, of forces holding together the material objects, and perhaps also of space and time (Rovelli, 2010).

The new theory appeared in 1968 by an observation of the Italian physicist Gabriele Veneziano, at that time a researcher at CERN in Geneva. His insight was to assimilate the elementary particles to vibrating wires, called “strings”, rather than to “point-entities” with no internal structure, which are giving problems of mathematical nature (the presence of the “infinite” in the calculation) in the process of unification.

Strings are infinitely short and thin wires, so that would be invisible even if they were examined by billions of times more powerful instrumentation than those currently available; strings are billions of billions of times smaller than an atomic nucleus and with zero thickness. These structures have dimensions of the order of the so-called “Planck length”, about $1,6 \cdot 10^{-35}$ meters, but which are stretched with a incredibly big force, up to 10^{39} tons (Di Sia, 2013).

This enormous stretching determines the frequency of vibration; increasing it, greater is the mass of the associated particle and consequently greater is the force of gravity that this particle exerts on the others. This is the central point making the superstring theory as the link between the gravity (described by general relativity) and the structure of elementary particles (described by quantum mechanics).

The modes of vibration of these thin and very short one-dimensional, open or closed wires (Fig. 2), generate all elementary particles constituting our universe, in a similar way as a more or less stretched violin string, which generates an infinite number of musical tones.

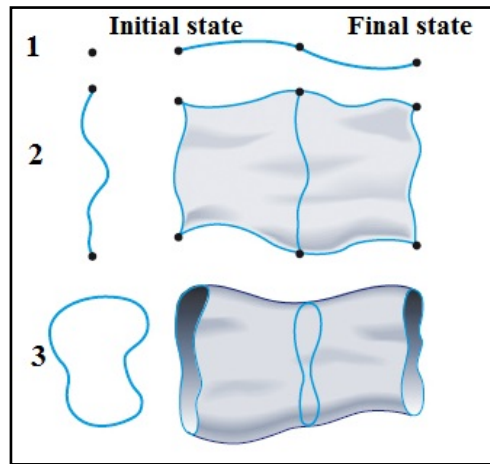


Fig. 2. A point-like particle (1), an open string (2), a closed string (3), and their evolution from an initial state A to a final state B .

The prefix “super” has been added to the superstring theory, when it has discovered that the theory obeys to a particular symmetry, called “supersymmetry”, i.e. for every particle of matter corresponds a particle of strength and vice versa (Fig. 3).

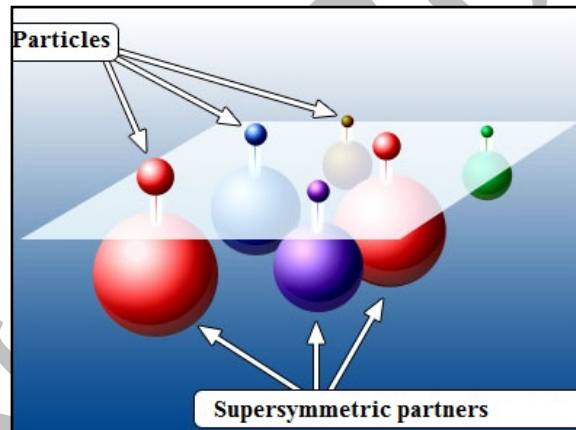


Fig. 3. Particles and supersymmetric partners, provided by the “supersymmetry”.

The elementary particles are divided into two big families:

- Fermions, by the name of the Italian physicist Enrico Fermi;
- Bosons, by the name of the Indian physicist Satyendra Bose.

The particles of matter (such as electrons and quarks) belong to the first family; the particles mediating the force (such as photons and gravitons) belong to the second one.

Supersymmetry says that every known particle has a “super-partner”, i.e. a “supersymmetric” partner, which has a similar behaviour; these new particles are named also “sparticles”.

4. The M-theory

The superstring theory includes on fact five variants, called “type I”, “type IIA”, “type IIB”, “heterotic O (HO)” and “heterotic E (HE)”; they involve 10 space-time dimensions. There is also the “bosonic type”, which involves 26 space-time dimensions (Fig. 4).

Table of string theories		
Type	Spacetime Dimensions	Details
Bosonic	26	Only bosons, no fermions means only forces, no matter, with both open and closed strings. Major flaw: a particle with imaginary mass, called the tachyon
I	10	Supersymmetry between forces and matter, with both open and closed strings, no tachyon, group symmetry is SO(32)
IIA	10	Supersymmetry between forces and matter, with closed strings only, no tachyon, massless fermions spin both ways (nonchiral)
IIB	10	Supersymmetry between forces and matter, with closed strings only, no tachyon, massless fermions only spin one way (chiral)
HO	10	Supersymmetry between forces and matter, with closed strings only, no tachyon, heterotic, meaning right moving and left moving strings differ, group symmetry is SO(32)
HE	10	Supersymmetry between forces and matter, with closed strings only, no tachyon, heterotic, meaning right moving and left moving strings differ, group symmetry is E₈ × E₈

Fig. 4. A summarizing table of string theories, with the main features (Web page 2).

The five kinds of theory also show some substantial differences. They differ in the way of incorporating the supersymmetry and for the shape of strings: the “type I” theory, unlike the others, provides for the presence of open strings (i.e. with free ends), as well as “ring-closed” strings (Fig. 2).

Six of the ten dimensions are invisible, being tightly curled on themselves, compactified on forming particular spaces, associated with each point, called Calabi-Yau spaces (Di Sia, 2006) (Fig. 5).

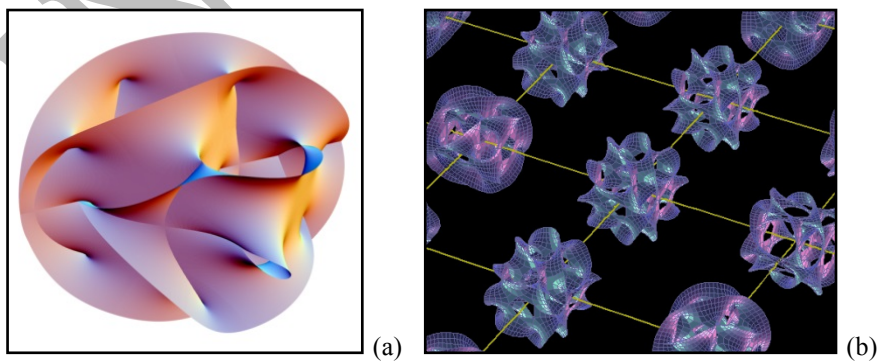


Fig. 5. (a) A two-dimensional representation of a Calabi-Yau space in six dimensions (Web page 1); (b) Calabi-Yau spaces associated with each point of our traditional space.

The addition of hidden dimensions may seem a strange and undetectable fact; on the contrary, it is a good supposition, being useful to provide a clear description of the physical world.

In 1995 the theoretical physicist Edward Witten discovered that the five superstring theories are intimately connected, so that they can be grouped into a single conceptual framework, named “M-theory”, where “M” is associated to many meanings, including “mother”, the mother of all theories. This new discovery could lead to the long-awaited “Theory of Everything” (TOE), but many of its properties have not been fully understood.

The M-theory exhibits some additional features, compared to those present in superstring theories:

1) it postulates that the dimensions of space-time pass from 10 to 11; the presence of an additional dimension allows to carry out exact calculations, not with approximations as previously;

2) it contains, in addition to one-dimensional structures (strings), also other elements that can be extended in several dimensions; these objects are defined “branes” (the term derives from “mem-branes”). Using this new original terminology, strings are called “1-branes” (one-dimensional objects), but there are also “2-branes” (two-dimensional surfaces), “3-branes” (three-dimensional objects), and in general multi-dimensional objects, called “p-branes” (p-dimensional objects). Because of the presence of these more extended objects with respect to string, M-theory is also called “theory of membranes” (Di Sia, 2005) (Fig. 6).

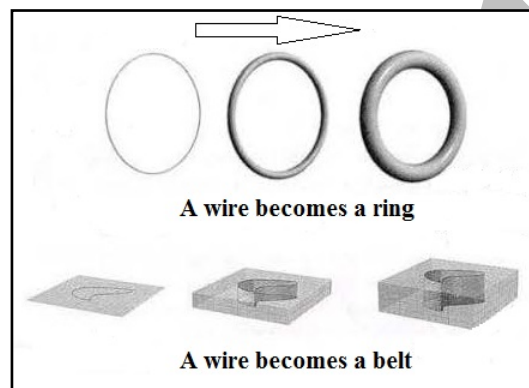


Fig. 6. New objects appearing in M-theory, the p-branes.

3) it is in connection with one of the most important human problems, i.e. the origin of the universe (Di Sia, 2001). The currently most widely accepted scientific theory, the Big Bang Theory, says that the universe, in the first moments of its existence, was incredibly small in size but at the same time extremely dense and hot. For the scientific analysis of such extreme conditions, it needs a quantum theory of gravity. The superstring theory seems able to give a convincing answer and a solution to this problem.

Based on the results of string theory, some new cosmological models have been developed; one of that states the existence of a “cyclic universe”, without a beginning and without an end in time, subjected to a never ending succession of contractions and expansions. It would be confined within two 3-dimensional membranes (we can imagine two identical flat and parallel sheets), evolving in time (i.e. in the 4th dimension) and fluctuating in a 5th dimension where there is the force of gravity, while the other 6 dimensions would be small and rolled within the texture of space (Di Sia, 2004).

5. Interesting pedagogical considerations

Themes and concepts considered in the previous paragraphs open the way to interesting cross activities, starting by the primary school. In particular, possible focus-points can be:

- 1) the concept of “space” as exploration of the “in-“ and “out-self”;
- 2) the connection with the spatial orientation and with the basis background of geometry and measurement;
- 3) the finite and infinite extension of space (Di Sia, 2013);

4) the number of dimensions, the idea of dimensionality in general, growing in abstraction with increasing age, connected with geometry (Reichenbach, 1957 - Di Sia, 2014);

5) the concept of time as flow;

6) the awareness of the triangle past – present – future (Piaget, 1986);

7) the different types of time (relative time, absolute time, “elastic” time, inner time) (Casasanto, Fotakopoulou, & Boroditsky, 2010 - Polya, 1973);

8) the way towards new amazing scenarios, opened with the theories of everything, such as the superstring theories:

- the extra-dimensions;
- points as spaces with dimensionality (Calabi-Yau spaces);
- the time travels,
- the multiverse,
- the discrete nature of space-time,

fascinated scenarios for humans at all ages (children, youngs, adults, seniors) (Di Sia, 2011).

6. Conclusions

Current research has not yet arrived to the formulation of a general principle that organizes and understands the individual parts of string theories. In every case, these topics are amazing and open the way to interesting possibilities of pedagogical reflections by the primary school.

Another fundamental question concerns the nature of space and time, what they really are, useful artifices for describing the relations among the points of the universe or something real when we are really immersed.

Pedagogy and philosophy can get profit from these questions, touching the roots of man and the deeper meaning of the existence.

The importance of the involved concepts and their bond with deep aspects of contemporary mathematics makes this study one of the most fascinating challenges of contemporary science, helps to think and can be used as an important starting point of the mathematical and logical growth of children by primary school.

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INTE 2014

Art in the early republic period: the example of theatre

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Abstract

In the introductory chapter, I want to study on the sample of theatre, art in the early republic term. Shortly, the significance of Ottoman art role is received consideration. After that, the assesment is especially on the development of theatre as a modernaziton contribution being on two or three theatrical presentation in Ottoman Term.

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Peer-review under responsibility of the Sakarya University.

Keywords: *Keywords:* Art, In the Ottoman Empire Theatre, Theatre in the early Republican period, Atatürk and Theatre

Art is a cultural element that can provide an agreement among people by going beyond the boundaries of time and country with the eloquence of languages and keeps this effect from the emergence of human until today. Because art that makes belief, joyful emotions and thoughts in transferable for people within concrete forms is performed by reasons over daily-practical objectives, it is a field that represents the mental contents and levels of people and community at most. In this regard, Fine Arts constitute one of the most important evaluation criterions for our nation and country as every society in yesterday and today.

Art is a cultural reflection of a nation and it is a measurement of its level of Civilization. Theater is one of these art branches and the most important tool that provides the level of culture and civilization rises.

Theatre was born with humanity. Living is a theater. Theatre was born with humanity. Worship, creation, lovemaking, pity, envy, strife, deceit, murder, death... Briefly, all events having thousands of faces and colors in life are always the art, and the actors are we people. Everyone sees himself in it. Either he feels pleasure, relaxes, laughs or feels distress and sorrows, cries or remains within fascination and excitement; it rises (Tor, 1963:5).

Art has been for the realization of various objectives in every society. In any case, it has contributed to the culture of society and formed culture. Attenuation and suppression of the studies in cultural and artistic fields and its lost in communal relations bring the cultural and artistic decline. A civilization cannot be considered without art (Erbay, 2006:10).

The start of the first acts is based on the history of mythology. The beginning of the first theatrical arts goes back to the ceremonies that are arranged in honor of Dionysus, which is god of wine of Anatolia. The first theater was born by the dramatic elements in these religious ceremonies gradually develop (Tokin, 1958: 2).

Although we have no precise information about the past of dramatic form in Turkish history, it is possible to take the past of theater up to four thousand years. A Serbian Researcher, Nikolic has found a theatrical text that was written in a primitive form and belonged to Turks. But the Turks, who had converted to Islam in the 11th century, have moved away from the living theater under the influence of the new culture. Nevertheless, the Turkish theater, until the Tanzimat, continued in the forms of acts of (public) storyteller, Karagoz and finally central shadow (imagination) acts.

The Westernization movements in the Empire that increased by the Tanzimat has also affected the

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· There are some people who take the past of theater in the Turkish history up to four thousand years. The paper cited from a lecture given in Bulgaria in 1936. 'Dort Bin Sene Evvelki Turk Tiyatrosu', Cumhuriyet, 8 Birinci Kanun (Aralik) 1936.

traditional theater. A significant portion of the intellectuals who met with the Western world started to be undervalued and despised because the traditional theater had not relationship with real and living life and realities and not any educational side in the period after the Tanzimat, and it was offered a theatrical life similar to the one in the West to be established instead of traditional theater as well as in many other areas (Kudret, 1994: 94-98). In this respect, the theater in the Western sense in the Ottoman Empire is started by the Tanzimat (Sevengil, 1959: 15) -. The then administrators of the State thought that the theater would be an important tool for the Turkish society to be gotten acquainted with the Western civilization.

It is known that some theater communities, which came to the Ottoman State from Europe before the Tanzimat gave several representations in Istanbul. These communities started to stay in our country for a long time since 1838 and build their own theater buildings (Sevengil, 1959:17). In the first year when Italian and French groups operated mostly, almost every type of theater was presented to the Turkish audience. Since 1844, theaters were followed under the leadership of the non-Muslim subjects of the Ottoman Empire. The first of them was the Bosko Theater in Beyoglu, which was established by Mihail Naum, who was in the Arab descent and member of a Christian family (Keskin, 2006:22,23). The first act in this place was the theater that was played Belisario Opera, which was the first dramatic study and published as an Ottoman Turkish translation. The first theater was followed by the "Haskoy", "Shark", and "Ortakoy" Theaters and the the "Tiyatro-i Osmani", which was built in Gedik Pasha in 1867 by Gullu Agop.

The first Turkish act in the Ottoman Empire is "Sair Evlenmesi" (*Poet's Marriage*), which was a one-act play that was ordered by the Palace to Sinasi for playing in the Dolmabahce Theatre (And, 1983:21, (Şener, 1981:5). *Sair Evlenmesi* was followed by such works that were written with the influence of Europe but more simple and monotonous as "Zavalli Çocuk" (*Poor Child*), "Vatan Yahut Siliste" (*Home or Silistre*) and "Akif Bey" (*Mr. Akif*).

After the Paris travel of Sultan Abdulazez, who ascended the throne after Sultan Majid, art and theater in particular were given more importance in the Ottoman Empire. When Sultan Azez returned from Paris, he was going to watch an act in Naum Efendi's theater several times together with his crowded entourage. People lined up to the hall during the days when Sultan went to the theater, but could not find a place (Nisan, 28.12.1950).

However, during the Tanzimat period, the Turkish theater could not go beyond its infancy, the Constitutional Era Theater could not show huge variations in terms of sociological data though showing some differences in terms of the theater of the Tanzimat Period in art. Because, it continued seen as an extension of the Westernization trend in the Constitutional Period as in the Tanzimat Period. That's why, it received criticism at times saying, "*Yes! Theaters are entertainment places. Nevertheless, it is not for us more. Because how we can say 'let's have fun' despite we cannot take steps in the way of progress/Modernization (Tarik-i Terakki)*" (And, 1971:25). But in the Constitutional Period, it began to be received the results of efforts to draw the interest of the Turkish youth who were candidate for new political cadres, the numbers of the Turkish players (actors and actresses) increased besides the numbers of the players who had the origin of non-Muslim. Most of the young people who were interested in theater were the children of writer, civil servant, officer, and pasha that graduated from a high school or a higher education institution (Sevengil, 1968: 2).

In the theater of the period, it was tried to display the contradictory situations of all ones who were Eastern but tried to live like Westerners, and it was tried to stage the adaptations, which were made from writer Molière, who introduced the Western lifestyle in theater, in addition to such history-contented acts as Namik Kemal's "Vatan Yahut Silistre" and "Celalettin Harzemshah", Abdulkhak Hamit Tarhan's "Tarik Yahut Endulus Fethi" and "Yadigar-i Harb", and Ahmet Mithat Efendi's "Furs-i Kadimde Bir Facia Yahut Siyavus". Everyday life adapted from the West was tried to introduce by the theater plays that were adapted and translated from Molière. So all the adaptations made by Ahmet Vefik Pasha, who was one of the most important intellectuals, from Molière both introduced the Western-style everyday life and showed the humor coming with superficiality. The adaptations of Molière were one of the people's most visited plays among the Western theater acts in the period of renewal

- However, it is known that some ones of the ambassadors sent abroad under the reign of Selim III transmit information to the Emperor about theater and opera. In the light of the information given to the Sultan, the first opera delegation gave a representation in the Topkapi Palace in 1789. But the privy secretary of the Sultan, who was accustomed to the Orient entertainment and did not speak a foreign language, did not the representation given. Refik Ahmet Sevengil, *Opera Sanati ile İlk Temaslarımız*, Istanbul, Maarif Basimevi, 1959, p. 15.

because they were appropriate to the character of the traditional theater plays (Keskin, 2006: 92). With such works as Sinasi's "*Sair Evlenmesi*", Huseyin Rahmi's "*Hazan Bulbulu*", and Ahmet Mithat Efendi's "*Eyvah*", the traditional family structure was criticized.

One of the most important developments in the Turkish theater before the Republican period was the Istanbul Municipality City Theaters and the State Theaters. The City Theaters were limited to Istanbul as a field of activity, but they were considered important in terms of institutionalization by the time of *Dar-ul-Bedayi* in the Republican period (Katoğlu, 2003:464). *Dar-ul-Bedayi*, founded in 1914, introduced its first show with "*Curuk Temel*" on Thursday evening of January 20 of 1916, and the foundation of the first European-style theater was laid in this way. In 1918, the Turkish girls were accepted to acting with a title of student (Refik, 8 Nisan 1940). Among the first names accepted to acting with the title of student, Afife Jale, Bahire, Memduha, and Beyza Refika are worthy of mentioning (Güntekin, 7).

One of the theaters, which was established in the Constitutional Period and survived to the time of the Republican Period, was 'the National Stage' of Sadi Fikret (Keskin, 2006:105).

Even in the most critical days of the Turkish National Struggle, it was not abandoned the theater, seen as an important step on the way of modernization, and Bulbul-u Neva Ihsan Bey, a mobile theater in Eskisehir at that time, came to Ankara and gave representations in Tashan in 1920. Although the initial interest desired could not be provided, it was not abandoned, and a group consisting of Otello Kamil, Riza, Sadri Ertem, writer Nizamettin Nazif and poet Munir Bey decided to establish a theater, and the acts written and played mostly by them were staged with the support of the Municipality. However, the desired success could not be obtained because of the brutality of war years.

The Early Republican Period

When it comes to the early Republican period, this period is remembered with Atatürk with no doubt. All the developments in this period were carried out by Atatürk's ideas and directives. It was surely unthinkable that Atatürk, who wanted to raise the Turkish nation up to the level of contemporary civilization, neglected the art in the reforms that were repeatedly performed in all areas of the country.

Atatürk focused on fine arts. Because, a human community who has no fine arts and works cannot be a "nation". Such a community cannot have a history (Velidedeoğlu, 1970:5).

The main objective of Atatürk was to raise the Turkish nation up to the level of civilized nations. For this, it is natural, it was necessary to advance in the field of art besides the progresses and developments in science and technology.

Atatürk, who stepped in art as well as the fundamental changes made in all institutions on the one hand by the Republic, assessed art and theater as a public service. The opening of a conservatory with the assistance of state, the establishment of the State Theater, and the transformation of the Istanbul Municipality City Theaters into the subsidized theater are a result of such initiatives in addition to the theater to be tried to reach public by the community centers.

We see the interest of Atatürk in theater at the times when Izmir was withdrawn. The Istanbul City Theater (*Dar-ul-Bedayi*) asked to invite Gazi (Atatürk) for their shows when they went to give a representation in Izmir. Nevertheless, because it was not known Gazi's perspective on art and artists, Behzat Butak, Sadi, and Muvahhit decided to invite Atatürk for their acts with a dare after a long-term hesitation. Not any Ottoman Sultan after Abdulaziz I went to the theater. Those times are the periods when Turkish woman artists did not come onto the scene until then and those coming were prosecuted by the police. The first Muslim woman on the stage in 1920 in Istanbul is Afife Jale. But Jale was removed from the scene by the fatwa of Shaykh al-Islam. While the case in Istanbul is so, it is wondered what would be the viewpoints of the government of T.N.A. (the Turkish National Assembly) and Gazi on the theater and moreover a representation in which the artists of *Dar-ul-Bedayi* and Muslim women have a play.

While the delegation was living the excitement for how they would begin the word, they breathed a sigh of relief with the words of Gazi saying, "*I'm glad that you came along with Turkish women. It will be much fun to listen to them on the stage with their beautiful accents.*" Thanks to the revolutionary leadership of Atatürk, who participated in the representations of *Dar-ul-Bedayi*, and the value that he gave to art, our female artists began to emerge on stage. Mrs. Bedia Muvahhit and Mrs. Neyyire Neyir with the *Othello* representation and Mrs. Nazire Sedat with her musical act called "Balo Kacaklari" appeared on the scene in the true sense.

Atatürk, who congratulated the players after the act, said the ban continuing for centuries against women even as a spectator should be ended anymore. He pledged that the state would support the art of theater (And,

1971:287). In the same year, Atatürk decided to develop, laying the foundations of the Turkish Theater along with his some close friends like Yunus Nadi and Falih Rifki Atay (And, 1971:287).

Atatürk had wanted the following features to be in the acts that would be on stage.

1. Especially, it will amplify the love of nation and patriotism and the excitement of Reformism,
2. It will recall the greatest moments of the Turkish History and introduce the heroisms of the National Struggle,
3. It will portray the country's largest cities, towns, villages, and natural beauties and it will promote and popularize each corner of the country separately,
4. It will put forward the ugliness and ridiculousness of bigotry, superstition, and bad customs,
5. It will show morality and courage in each field with great examples,
6. It will instill the love of populism and bear the qualities that guide spirits to that major path (Onberk, 1982:91).

By means of this opinion, the Teachers' College for Music was founded in Ankara in 1924. The first branch consisting of two branches included 'painting, decorative arts, architecture, and sculpture', and its second branch contained 'music and contemplating' arts.

When the Republic was founded, Dar-al-Bedayi had been dispersed. A part of artists in Anatolia and a part of them had worked in Istanbul separately. The artists who did not come together for a long time could come together in 1926. They had begun their first representation with a play, which was translated from French and called "*Kir Cicegi*" (wild flowers), on the evening of November 14, 1926, in the Odeon Theater in Beyoglu. In 1927, Dar-al-Bedayi moved to Tepebasi and transformed into an art institution with the participation of Muhsin Ertugrul, who recently returned from Europe, in becoming more efficient.

While Turkey was living a big improvement with the reforms carried out in sequence on the one hand, Atatürk was watching theaters and plays together with the people as long as he founded an opportunity and he was conducting interviews with artists.

On 02/02/1923 at night, he watched the play called "*Ucurum*" (the Cliff) in the Bahribaba Theater with his wife. In Samsun on 16 February 1924, he watched a play along with the people. Five days later, he watched the act about the Independence War in Sarikamish with his wife again. On 05/10/1924 in Bursa, he participated in the play showed by the Istanbul City Theater. On 19.01.1931, he watched the play, called "*Akin*" (Raid), of Faruk Nafiz Camlibel in the Istanbul City Theaters. Additionally, he watched Aka Gunduz's play called "*Mavi Yildirim*" (the Blue Lightning) in the Ankara Community Center on 04/03/1932 and Behcet Kemal Caglar's play called "*Coban*" (the Shepherd) in the Ankara Community Center on 11/02/1932 (Erbay,2006:155).

It attracted attention of the environments in Ankara Government because Sadi Fikret's community called "*The National Scene*" made a trip to Anatolia, and Atatürk appreciated the contributions of artists in the reforms, addressing to the theater community in June 10, 1926, and wanted that they kept on their tours to tell our people about art. "*I appreciated you very much. You have important services in our reformation too. I have not watched the being uniform and full of art such your representations among representations that I have seen so far. I would recommend particularly that you determine to do your art as you accept it as a profession and get along with your friends in sincerity. Your greatest service for home is going to tell our people what the art is, wandering Anatolia through and through. Please continue your tours in regular*" (Atatürk, 1997:258).

Atatürk's interest in the performing arts intensified in the 1930s more. He makes one write a play, edits the written plays, gets one compose, and watches. Meanwhile, the idea of establishing a state theater increasingly matures besides (Ozakman, 1988:1059).

Metin And identified Atatürk as "*He is the first dramaturge of Turkey*" while treating Atatürk's interest in theater, because Atatürk bespoke a play to writers, offered a subject, and made corrections by reading the written texts. These studies of Atatürk are the acts of "*Bay Onder*" (Mr. Leader), "*Tas Bebek*" (Stone Baby), and "*Bir Ulku Yolu*" (A Way of Ideal). He meticulously stood on the issue of language in works. He wanted the words to be Turkish and made some amendments in the original names. He wanted "*Bayan*" to be used instead of "*Begum*", and extracted the hackneyed words from the text. He wanted to exchange the sentence in the text of "*Tas Bebek*" about "woman should be loved like an ornament" with "*the existence of woman is the foundation of a nation in thousands of points.*" Atatürk removed the author's words in "*Tas Bebek*" saying "*Love is a fun!*" and wrote on the opposite "*counting love as a fun is not to take it seriously.*" In addition to various changes that he made in the play called "*Bir Ulku Yolu*", he made this one more suggestion: "*If it needs to kill a man, he can be one of those who do not succeed.*" Furthermore, the first two of these three plays staged on the opera with the

recommendation of Ataturk again. “*Bay Onder*”, one of them, was composed by Necil Kazim Akses, and “*Tas Bebek*” by Ahmet Aydan Saygun (And, 1983:9).

In 1927, the first serious step was taken to establish the funded theatres under the Ministry of National Education. To this objective, it was given the opportunity to build a theater building and establish a theater community in 1930 by Article 15 of the Law on Municipalities. Thus, Dar-al-Bedayi also became an institution affiliated to the Istanbul Municipality in 1931. Another significant improvement in the field of art in the same year was the establishment of the Turkish Union of Fine Arts. The objective was to educate artists in the fields of literature, painting, theater, music, and sculpture. Muhsin Ertugrul was brought in the head of department of theater, besides.

Ataturk, who invited the theater artists to the House on 11/04/1930 and chatted with them for a while, honored the artists with the compliments and expressed the value that he gave artists with these words. “*Ladies and gentlemen... You all can be a deputy, minister, even a president, but you cannot be an artist... Let's like these children devoted their lives to a great art.*” Meanwhile, Muhsin Ertugrul had said to Ataturk, “*We want a theater school, Dear Pasha!*” They had received a letter not to do assistance in the next few days about the issue in which Ismet Pasha personally involved (Ertugrul, 1989:467). Perhaps the situation of country was not suitable for the conditions of that time. Nevertheless, on 19 November 1930, a Vocational School for Theater was opened in Dar-al-Bedayi at least.

The life of this school, which was opened with the grant given by the Ministry of National Education, was two years. Among its first and last graduates, there are such important names as Samiha Berksoy and Sami Ayanoglu (Ay, 1948:3). The theater after 1930 had the task of instilling the republican spirit into community and new generations under the light of Nationalist, Populist, and Republican principles that draws Turkey's destiny.

When talking about the artistic developments of the Early Republic Period, it should not be forgotten the great contributions of community centers that were founded in 1931. They were the establishments that performed the art dissemination efforts and fulfilled the duty of bringing them forward the people. 478 community centers and 4322 public rooms, which kept on their studies in various branches for fifteen years between 1932 and 1951 served in common and effective as the most important houses of culture and art of the young Republic of Turkey on the way of modernization (Karadag,1988:135).

Ataturk, in the 10th Year Speech, did not neglect to mention about fine arts and stated that the rational and scientific way of walking towards national goal would be possible with loving fine arts and advancing in this field: “*The historical qualification of the Turkish nation is to like fine arts and advance in them. It is for that, it is our national idea to feed and develop continuously our nation's high character, untiring diligence, innate intelligence, loyalty to science, love of fine arts, and feeling of national unity with all means and measures*” (Ataturk, 1997:318,319).

In 1934, the Academy for National Music and the Academy for Representation were established in Ankara. Nevertheless, the department of theater of the school could start to work hardly in 1936 (And, 1983 :12-14).

There was no sufficient number of trained artists in Turkey to make them. Such young talents as Ulvi Cemal Erkin, Ekrem Zeki Un, and Adnan Saygun, who would make important contributions to the Turkish music in the later period had been sent to Europe for a better education (Makal, 2000:86-87).

On the other hand, the State decided to bring foreign guides in Turkey to catch the contemporary level in theater. For this aim, German Prof. Carl Ebert was invited to Turkey by the Ministry of Education for the department of representation of the conservatory of which foundational work continued in Ankara. On the letter of invitation, it was written that the theater life in Turkey could not develop sufficiently, the government wanted to make reforms in this field despite there was a city theater in Istanbul that had several good staffs, the Ministry aimed at giving the work of theater in the hands of an expert, and this expert would be in Ankara as an adviser of the Ministry for all theatrical matters (Yucel, 1986:473).

To protect Fine Arts, ‘*the New Law for Income Tax*’ was issued on 22/03/1934. (Zobu, 1949:2).

Republic of Turkey has been entrusted to young people. Therefore, because today's children would be tomorrow's elders, it has been required the establishment of child's theaters. Our child's theater, opening its first curtain in October 1935, has continued its representations regularly and also benefitted from small audiences on its scene (Balkir, 1947:15).

Ebert, who began to work coming in Ankara on 22/02/1936, was appointed to set up the music branch of conservatory in the School of Teacher for Music in Ankara by the second agreement signed in the same year.

Ataturk announced these studies at the opening of T.N.A on 1 November 1936 with these following statements: “*Relevance and labor Kamutay (the Assembly) will show for each branch of fine arts are very effective to increase the efficiency of civil life and diligence together with the human of nation*” (Atatürk, 1989:405).

However, Ataturk have not found the studies done sufficient, he stated to be worked more for this matter during the opening speech of the Third Convening Year of Fifth Period with these statements:

“*It would be appropriate for more effort and sacrifice to bring the Conservatory, which was founded in Ankara in the last year, in a situation that it is able to be served for music and stage in a desired technical rapidity*” (Ataturk, 1989:420).

This warning of Ataturk was immediately taken into account. Celal Bayar, appointed to the Prime Ministry on 08/11/1937, made the following statement on the subject: “*We will approach our theater of nation as a reflection of the most aesthetic and plain statement of the Turkish culture and our beautiful Turkish language. The national theater will be the most efficient source of our national art in this manner. We need to emphasize on the adaptation of modern techniques to achieve our goal*” (And, 1983:288).

Bayar accelerated efforts at the request of Ataturk. Ebert was given the authority to complete the theater and opera organization of the Ankara State Conservatory, manage its education, and administer any kind of technical works related to the activity of representation and opera of the practicing scene of the State Conservatory. Although the work was begun immediately, the aim of establishing a State Theater was hardly reached after the death of Ataturk (And, 1999:287). The opening of the State Conservatory with its all departments as a modern education institution lasted until 1940s. Nevertheless, Ataturk could not see the results of the study that he prepared all its kinds of infrastructure.

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INTE 2014

Arts and education for underprivileged people: Community-based art projects case study

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Abstract

Many people lack opportunities to participate in art programs which connect their lives to a bigger community. Through the description of five case studies for underprivileged people, community-based art projects show the positive impact on people lives. All participants, as a group of individuals, realized the importance of connecting to other people, and developed the joy of accomplishment and the sense of responsibility for their community via the process of creation of artworks.

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Peer-review under responsibility of the Sakarya University.

Keywords: Community-based art education; underprivileged people; participatory research; collaboration; diversity

Introduction

Many people lack opportunities to participate in art programs which connect their lives to a bigger community (Buffington, 2007; Claus & Ogden, 1999; McAleavey, 1995). Notably, there are numerous people who are isolated but eager to learn and spend time with art. Art programs, especially community-based art projects, can offer people different ways to actively engage in the community they belong to (Boiten & Stimson, 2003). Moreover, community-based art projects reflect current social issues and address the needs of local communities (Madden, 2000). Therefore, this study mainly focuses on the community-based art projects for underprivileged people who have limited opportunities to enjoy art experiences in their daily life, and the meanings and roles of arts and art educational programs for diverse groups of people.

Method

In order to deeply understand the community setting where these art projects were conducted, a participatory research was opted for this study. As a participatory research, one of the main goals of this study is to create connections between participants and local communities. Therefore, researcher mainly acts more as a supporter than a director, who encourages participants (Stringer, 2014). In other words, researcher, as a part of the stakeholder groups, provides a chance for people to observe, think, realize and experience what they could not be aware of. The fundamental notion of this study is that people interpret social phenomena based on their own perspectives in particular conditions, so the way of approaching the phenomena should be flexible and adjustable for different situations (Stewart & Walker, 2005; Stringer, 2014).

Education impacts not only people's own growth but also ways of interpretations of social patterns, so researcher focuses on comprehensive explanation of each situation of the projects. Furthermore, participatory research is not a rigid framework but an adjustable way to explore intimate relationships and ordinary daily life in particular situations, so each project was designed and tailored to the place of the communities and time when it was conducted. It also allowed stakeholders to voice their desires and opinion, which both represent their experiences (Stringer, 2014).

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There are three main types of projects listed below. All projects were documented with field notes, diaries, and photos. Additional interviews and observations were conducted as well.

- Pre-designed volunteer activities
- Self-developed activities
- Combination of pre-organized activities and project development

Pre-designed volunteer programs are organized by non-governmental organizations, universities or social service agencies. These organizations studied the stakeholder groups for many years and designed the art programs based on their research. Therefore for this project type, which is not a main category for this article, researcher mainly applied pre-organized activities guidelines. On the other hand, self-developed activities are mainly created through researcher and participants' collaboration and communication about their needs. The participants are the main persons responsible for maintaining the projects. Lastly, the combination of the two project styles creates official programs which are annually or biannually provided by the organizations.

As participatory research primarily underlines the importance of communication with stakeholders, contribution to communities, and sharing of personal skills and experiences, the self-developed activities and combination of pre-organized activities and project development represent the main types of projects of this study.

Body

Complexity of society and diversity of human experiences should be understood under social relation. Moreover, importance of community contexts and sense of social values, which may lead to supportive networks and resources, should be highlighted (Stringer, 2014). Participants, who are from different social backgrounds, put a priority on the community contexts. This study describes five categories of arts projects according to their roles and functions, which took place in five different countries.

.1. Providing an opportunity of artistic expression

A volunteer program of the Pacific Asia Society (PAS), which is a combination of pre-organized and participant-developed activities, offered elementary students, who were depressed by lack of facilities, ways to express their artistic ability through arts education in the Philippines. Due to lack of educational facility and poor environmental condition, students could not fully experience arts programs. This encouraged them to actively participate in this art project. Through arts classes, students created their own storytelling, which reflects their early childhood, and links arts to expression of real life.

.2. Learning cultural diversity

In Moscow, Russia, Korea Internet Volunteer (KIV) provided Korean-Russian middle school students and teachers with a way to learn cultural diversity through art education using computer programs. Researcher introduced traditional Korean culture and contemporary modern arts and technology for Korean-Russian and Russian students and teachers through examples of culture's various definitions. Russian students and even Korean-Russian students who were not exposed to traditional Korean or modern technological artworks were excited to see a new cultural aspect and were willing to embrace each other's cultures.

.3. Creating space with emotional connection

A mural painting project with handicapped students was designed and proposed by researcher and supported by the Student Council at Ewha Womans University in Seoul, Korea. Researcher mainly emphasized a connection to the community, beyond an academic outcome of a research. Through several discussions with participants

about the kind of project the stakeholders would like to create for their community, the themes of the mural were decided to be an amusement park and a natural forest where students and teachers at HanKook WooJin School would like to go (see Fig. 1). Participants of this mural project were sixteen college students, twelve disabled students and four teachers at HanKook WooJin School. College, middle and high school students who participated in this project found the experience very rewarding because they all developed a special connection with other people.



Fig. 1. (a) & (b) Amusement park; (c) Natural forest

.4. Helping students develop new skills

As a volunteer of a non-governmental organization in Peru, researcher taught a new art making skill to Peruvian elementary students. For the students, art class should be one way of learning practical skills to create future income. Students who were suffering from lack of income in their family actively participated in learning how to make bracelets and ornaments they can sell to tourists in their local community (see Fig. 2). They successfully created income by selling many self-made ornaments and realized how art can help them live a better quality life.

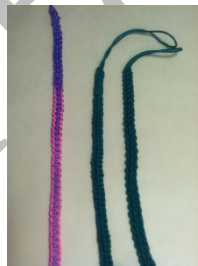


Fig. 2. Bracelet making

.5. Building independent communities

Members of the Gainesville Senior Center in Florida, USA, created a mural which reflects on their natural environment and daily life, and depicts local scenes such as swamp, palm trees, alligators, playing card game or pool and zoomba dancing (see Fig. 3). As Giroux (1992) stated that education can increase a human's potential ability, this mural project encouraged participants to create their community environment with their artworks. Similarly, community members of the Apalachicola Senior Center in Florida, USA, built a mosaic reflecting their daily lives and cultural and natural backgrounds (see Fig. 4). By creating artworks for their own community, participants feel satisfaction from their outcome and active involvement. This created the new desire to preserve and pursue the development of their community environment.



Fig. 3. (a) Gainesville Senior Center mural (part); (b) The completed mural



Fig. 4. (a) Apalachicola Senior Center mosaic; (b) Edible garden with the mosaic

All projects were conducted at locations where there were lack of facilities of arts and education (see Fig. 5), and with people who have the desire to experience these arts programs and share their lives with others through co-developing art projects. Activities were sometimes organized by a small group with one or two volunteers, or were led by a larger team with ten to sixteen volunteers and more than sixty eight participants. Through these activities, people could express their own interests and talents and the common meanings or goals of the communities as the place they belong to (Boiten & Stimson, 2003). There were no specific boundaries between stakeholders and volunteers or leaders and followers (Madden, 2000). From beginning to end of the art programs, all participants were fully engaged in the process and the community explorations, which led to positive changes in their daily lives. Specifically, they constantly learned from one another during the whole process (Wood & Govender, 2013), and felt a sense of accomplishment when the projects were completed. Witnessing the before-after differences made them realize the importance of being part of a community.



Fig. 5. (a) & (b) A local community environment

4. Conclusion

Researcher studied several roles of arts and arts education in diverse communities. Based on people's cultural, economic or physical situations and backgrounds, arts and education approaches differ. However, all participants enjoyed interacting with arts and wanted to have more opportunities to express themselves. The learning process linked art to real life and people became more aware of current social issues and the development of their community (Stewart & Walker, 2005). People actually started to care more about their surroundings. Additionally, when researcher became a real part of the community she was studying, doing a research became an enjoyable on-going human experience. As Papastergiadis (1998) points out that the ultimate goal of doing research is having a "better world" (p.69), artists and art educators can develop a better world with these community art projects and should consider the benefits of community projects for promoting arts, encouraging people self-development and improving people's quality of life.

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As basic ecclesial communities in case of political organization of popular movement for housing in the city of round trip - Brazil (1970-1980)

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Abstract

During the 1970s, some lay movements of the Catholic Church contributed to the development of the principles of liberation theology marked by critical role in defense of justice and social rights. This theology was fierce during the military regime, causing more clear internal divisions between conservatives and progressives. During this period, the space of the Church was presented as a single place of re-articulation of popular movements in Brazil.

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Peer-review under responsibility of the Sakarya University.

Keywords: ecclesial communities

Introduction

In Volta Redonda county region of South Fluminense, this perspective has become this political reference period, for his engagement in social movements and ecclesial practices. This feature of the local diocese was the result of a pastoral line beginning in the late 1960s with the arrival of Don Waldyr, which brought an important contribution to this innovation of the Church.

To understand this relationship between religion and politics, consider that produced a religious conception which contained both ethical and religious significance as socio-political, through a practice with the ideal of social transformation, which should be conducted by the popular classes as a subject social. This meaning in turn showed a relationship of affinity between religious ethics and social utopias, possible in a historical context characterized by social polarization and the political conflict, according to Löwy (2000, p.62).

Within this reality religious faith turned into a tool of emancipation of the working classes, having great influence on social movements through adherence to a house.

Regarded as exemplary monument of a project of industrialization, organized and sponsored by the Brazilian State in its phase of conservative modernization, the city of Volta Redonda was architected to build a factory and a city.

Transform Brazil into a modern agricultural and industrial nation was autonomous national reformist-conservative

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dream. However, the developmental national ideal was confronted by U.S. hegemony that had Brazil as a developing country. This phase of the imperialist economy aimed to underdeveloped countries Completion of its economy, fueling a relationship of economic dependence with countries of the First World.

For Octavio Ianni (1989) the uniqueness of the relationship of this class with the proletariat, the agrarian bourgeoisie, international capitalism and the State founded on the conversion of an economy facing an increasing degree for the domestic market.

The urban space is designed for the ideal of discipline and organization and work toward creating the "company town", ie workers' cities emerged with a production infrastructure, a market for hand labor and available low circulation workers. However, this city collided put in social conditions. If one side built up an idealized and planned to benefit the capital, another industrial town that project contrasted with a social life already organized on site.

Migration clashed with the discipline and order of the new city making the dream of Eldorado, the wonder spot in wealth and opportunities to be replaced by the harsh reality of the image created by capital. Accommodation to the periphery, this was the path traced by the workers of the National Steel Company (CSN) who experienced, at an early stage, the striking reality of the capitalist universe. Out of the wealth production center, these workers lived in urban and population growth, being taken to the outskirts of the city, considered only place for them. Expelled from the center towards the periphery of the growth made in a disorderly way, without planning frameworks, such as: housing, piped water, sanitation, public transportation, paving, etc. Living in appalling conditions, in no time, received the attention of the State.

In that space of abandonment and hopelessness emerged as an ally of the popular , a current in the Catholic Church, which made the choice for the poor , rescuing primitive values of Christianity , geared to solidarity , social justice and critical to competitive market values classes . Liberation theology appeared in response to a church that, over the centuries, allied only to the rich and powerful. The terrible living conditions of workers is substantiated through the practice of those securities, in a politicized movement lay the Basic Ecclesial Communities (BECs) . The organization of these Christians was instituted in the popular media as social space of a new consciousness producer can enter the social and political practices in the religious sphere. One must remember that in this context the military regime implemented by the military coup of 1964. There was a growing movement of opposition to the regime started with the organization of the left base of the reforms, the Government João Goulart. In the Church, the Catholic Action has inaugurated new way of working, forming movements of which the University Youth became the protagonist in the struggle for social justice , resulting in their radicalization and the essential role of his reflections and political engagement in the formation of CEBs and the emergence Liberation Theology (Pinheiro , 2010) . CEBs and popular movements have articulated towards claims of social rights in the peripheries.

The main objective of this dissertation was to understand and explain the role of the Basic Ecclesial Communities in the political organization of the popular housing movement in Volta Redonda process in the 1970s and 1980s.

For this purpose an empirical research was carried out, using as technical taped interviews with activists of CEBs in Volta Redonda. The survey was applied to a number of 09 respondents, aged 50 and 80 years of age, who participated directly in the foundation and development of BCCs in this cit, as well as in others. The time of the interviews varied between one and two hours, which resulted in a valuable material, with a hundred printed pages, and is available for consultation in Lassal (Laboratory of Social Service. New Social Movements and Corporate Projects in Latin America). The contacts were initially obtained through the Diocesan Curia Barra do Pirai , Volta Redonda , delimited after surveying the most important leaders still alive who participated or have experienced in decades included in this study . Thus the group studied was in accordance with existing conditions, taking into account the historical boundaries of the object . The interviews were administered at different sites , comprising : a religious and a layman in the Diocesan Curia ; two lay leaders of the movement for housing , now residing in occupations of Rio de Janeiro ; two religious who work in the House of Child and Adolescent Volta Redonda and two religious and leadership in their homes in Volta Redonda . The research was guided by four themes , subdivided into six questions , which were used in the exposure of empirical reality , in the third chapter . These axes are: the emergence of CE; methodologies used by CEB ; Liberation Theology among the leaders; climate of repression in the 1970s and the CEBs ; housing in Volta Redonda ; CEBs today.

This work is structured in three chapters. In the first chapter a historical analysis of social movements was performed, showing the importance of the union movement and the popular movement for housing in Brazil and particularly in the concrete reality of the city of Volta Redonda. Also analyzed the history of public housing in

Brazil and the right to land and housing, since the nineteenth century. In addressing the elective affinities were recovered as a tool of interpretation as discussed by Löwy.

In the second chapter the historical context of the emergence of Liberation Theology was presented, the Basic Ecclesial Communities (BECs) as an instrument of struggle in defense of the rights of the lower classes, consolidating at the time as a social movement in the process of organization.

In the third chapter were rescued the construction of the city of Volta Redonda, the National Steel Company and its repercussions for the popular classes. Following the fieldwork is presented in a systematic way, through extracts from the interviews that illustrate how the CEBs arise and his popular character boosting popular urban social movements. The aim of this analysis was to show how liberation theology and CEBs manifested in action actually specifies constituting Volta Redonda, a popular movement of relief to the local society.

Was the object of analysis in this dissertation the contribution of CEBs in Volta Redonda in the 1970s and 1980s, the articulation of the movement for housing. The research confirmed the role of liberation theology as the foundation and political-religious claim praxis of urban infrastructure and training tool of social movements in that context that acirravam class conflict under the hegemony of industrial capital, in the context of dictatorship in Brazil.

There has never been in Brazil, the guaranteed right to urban land use, that the capitalist system is a commodity, played as one of the most important objects of speculation. The right to urban land and the right of all who inhabit the city reveal historical processes of popular demands, especially articulated in various social movements that were fighting for the implementation of an Urban Reform, and performed strongly over the drafting of the Federal Constitution assuming a leading role in lobbying and organized struggle.

The process of building the Magna Carta was instrumental in the trajectory of democratization of the country, mobilizing the society in the struggle for the consolidation of social and collective rights. At its core, the urban question evidence acquired through social movements and later in institutional debates in Brazil, expressing the urban condition of the country itself, with 70 % of the population living in cities.

All the political process that the country was living in that context was a reflection of reality Latin – American. Several countries of the continent witnessed the advance of authoritarianism through dictatorships.

The world was divided into two powers, Brazil rocked by the economic miracle, and the Christian Liberation interpreting the political context into the experience of faith. So that breaks the Theology of Liberation. The old alliance between the Catholic church, the state and the ruling classes of Latin America has been challenged by a growing number of priests, nuns and lay people through their pastoral practices. Liberation theology through the history of the movement started from the late 1950s recommended since the 1970s, when systematized, that pastoral work is preferentially addressed to the oppressed peoples of Latin America (from the meetings of CELAM), ie, the popular classes organized as a means to raise awareness and fight.

The interviews show that the need to fight for housing was fueled by faith and by groups of coexistence of CEBs. It became clear through research that the strengthening of the social movement gave up the plan of faith, supported and expressed through a symbolic discourse coated critical and political content. Living with Faith and critical reflection constituted privileged field for the emergence and maintenance of the movement for housing. Catholics was explicit in the dialectic between religion and social movement, space to strengthen grassroots groups and political militancy.

The establishment of the Workers Party was a positive result of the organization of the CEBs, which was present in almost all organized segments of Brazilian society that fought for the emancipation of the working classes. Founded in 1979, the PT was a joint effort among intellectuals and trade union leaders and Christian. Triggered this political activism, also the Central Workers - CUT.

The development of the analysis in this paper confirms that the Urban Reform implies a new urban ethic to condemn the city as a source of profits for the few and impoverishment for many. It should be understood that the movement's struggle for housing occurs in opposition to the city as a commodity, fragmented and unfair, as opposed to the city as a use value where everyone has access to the costs and benefits of urbanization. Prevails in short, the right to the city understood as the right to housing, urban land, environmental sanitation, urban infrastructure, transportation and public services, work and leisure for present and future generations.

In view of these considerations it is evident, therefore, that the struggle for housing in addition to creating constitutionally guaranteed rights also stimulated the organization of new social struggles in close relationship between social movements and concerned with the popular classes sectors.

However the arrival of the 1990s is marked by the insertion of the neoliberal project in Brazil, an ideology of the

market, which minimized the social, and hence the social movements and their demands .

We can not fail to mention the institutionalization of social movements , an action that led to a relative participation in the elaboration of public policies and in control of government action that emerged from the creation of participatory institutions . The official line was that inaugurated a scenario of inserting social movements in state institutions and direct relationship with government agencies . We also saw the emergence of NGO - Non Governmental Organization , a new trend from the 1990s , distinguished from social movements , although not always contribute to the social struggles .

The City Statute , adopted in 2001 , brought to the normative question of regularization references , and have advancing towards promoting greater instruments of tenure and meet the fundamental right to property . One can say that after many years of its adoption , the effectiveness of even the territorial reorganization is still shy .

Drew our attention that several interviewees point to the weakening of the CEBs and the Theology of Liberation. Lesbaupin (1999) puts it against neoliberalism, strengthened the forces before them today are demobilized, but hold within themselves the roots of resistance.

The National Faith and Politics Movement is appointed by the leaders of the Christian movement as an instrument of resistance on the part of Catholics, feeding liberation theology with new emerging issues in reality and daily struggles. To Pinheiro (2010) this movement has the capacity to anticipate a debate around what is essential and common to the various spheres of politics, however, the question that arises is about the guidance given to the problems of militancy, the largest being the crisis of leftist ideals.

Nowadays, the deepening of neoliberal ideals threatens the formation of new social subjects, given the low resistance, whose boundaries are declared in the dialogue or consensus between the contradictory government strategies in the implementation of non-structural policies to combat poverty.

To lay Catholics interviewed, one need to put the current context is put the environmental issue on the agenda of church groups. The ecosocialists generally believe that the expansion of the capitalist system is the cause of social exclusion, poverty, war and environmental degradation becoming aggravated by globalization and imperialism , under the supervision of repressive states and transnational structures .

The way the leaders, activists, and intellectuals Catholic lay activists of the movement faced the decades of 1990 and 2000 brings to our substantial reflection elements that explain the historical processes by which Brazil went and why the struggle must continue .

The struggle to build an egalitarian, just society without exploitation and gained the discourse of faith , a prophetic and utopian dimension in the sense of absence and need to fight for social rights . The right to housing, social emancipation seen from the perspective of faith, engendered social rights in the democratization process of the country are aspects of a complex class society . This poses exciting challenges for political action. The guarantee of fundamental human rights have been the result of historical processes that have fights advances and setbacks , progress , setbacks , victories , defeats and massacres of social struggles.

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Assessing different perceptions towards the importance of a work-life balance: a comparable study between thai and international programme students

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Abstract

This paper has the objectives of evaluating the different perceptions of Chulalongkorn students who are registered within Thai and International Curriculum towards the understanding and awareness of the concept of Well-being with a key focus on the importance of a Work Life Balance (WLB). Sixty five questionnaires were distributed among students who undertook courses offering aspects of WLB as part of the Introduction of Recreation for Thai curriculum and Effective Career Management for International Curriculum during second semester 2013. Data analysis was processed by statistical programming software and accordingly categorized into groups of data by thematic analysis. The findings revealed that two groups of students had a high awareness of WLB importance and stated that this concept is essential to ensure an optimal and valued life as well as the development of knowledge and skills from the educational system. However, both of them stated the problem of limited WLB in practice due to an overload of university's assignments and projects but they have acknowledged a desire to adopt the WLB concept through recreational activities outside of and after their studies. Furthermore, students who has undertaken Thai curriculum perceived that most of the university's facilities and activities offered definitive aspects of a WLB more than other groups held the general perception that the university should improve those ones. The paper delivers an in-depth Discussion ending with a conclusion encompassing all aspects noted and then looks further to the importance and future implications of this research which presents the extra-curricula activities that university should conduct to improve students' quality of life and WLB.

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Peer-review under responsibility of the Sakarya University.

Keywords: Work-Life Balance; Thai Students; Leisure and Recreation; Leisure of students

Introduction

In recent times, Work-Life Balance (WLB), the concept of balancing work and leisure-time in harmony with physical, emotional, and spiritual health (Simmons 2012), has become an essential concern for many organisations. The reason being that better work-life balance employees are more influenced towards job retention and focus (Susi and Jawaharrani 2010), as well as overall satisfaction in work and life (Guest 2002). Such claims are supported by numerous studies including Greenhaus *et al.* (2002), Guest (2002) and Wong and Go (2009), many of which identify that individuals are more likely to have an improved quality of life, mental health or well-being when he or she can balance both their working lives and life outside of work. Additionally, further content acknowledge the ability of a WLB to influence a healthy lifestyle, highlighting the importance of leisure and recreation to encourage well-being (Godbey 1999), to act as a stress buffering role (Coleman 1993; Coleman and

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Iso-Aloha 1993; Trainor *et al.* 2009) and foster a higher quality of life (Lloyd and Auld 2002) and equally as important, to increase work productivity and efficiency (Guest 2002).

In addition to the concern for WLB by organisations and business, there is also a risen awareness concerning academic lifestyles, several studies focusing on WLB regarding the condition of teachers (Bubb and Earley 2004), academic and support staff aspects (Doherty and Manfredi 2006) and the viewpoint of students in many levels such as highschool (Tausig and Fenwick 2001); college (Doble and Supriya 2010); and doctoral students (Martinez *et al.* 2013). In regard to students, it was revealed by Doble and Supriya (2010) that a balanced student lifestyle can be accomplished by effective time management, healthy eating, being active, setting goals and priorities, encouraging successful degree completion (Brus 2006; Stimson and Filer 2011; Martinez *et al.* 2013). However, some may struggle to obtain life balance from individual factors such as personality, personal control and ability to cope under stress and pressure, gender, age and so on (Guest 2002). Students can also be caught in a state of imbalance within educational domains primarily due to a lack of time and overloaded schedules (Martinez *et al.* 2013) such as keeping up with schoolwork (Misra and McKean 2000), excessive homework (Frazer and Kohn 1986; Doble and Supriya 2010) and assessment deadlines (Misra and McKean 2000). All of which further impose stress upon students, as noted such 'unwell-being' holds the potential to negatively impact both physical and mental impairment (Murphy and Archer 1996) and is in conflict with student productivity and effective time management. According to Grund *et al.* (2014) it is not only academic success that is sufficient for students, on the contrary, they should hold a keen focus on leisure time and other activities also in order to be successful students. Hence, it can represent the connection to WLB by the context that students should concentrate on school's work along with leisure time. As Chulalongkorn University, the first university of Thailand has a focal point from University Desired Characteristics of Graduate stated in the university's policy that students should maintain their well-being and deal with pressure along with aspects of education in order to be valuable in a global society (Chulalongkorn University Council 2010). This also implies that ideally students may be better for not only focusing on an academic perspective, but also taking into consideration their well-being and other aspects of a work-life balance. However, there are limited studies concerning the perceptions of Chulalongkorn students on whether they perceived their life balance to be influencing their well-being or characteristics of such. Considering the relationship between WLB and well-being, this research aims to examine the connection of these two aspects along with leisure and recreation as the supportive approach for students well-being by assessing different perceptions toward the importance of WLB from a comparative study between Thai and International Programme Students that evaluates the differences of their WLB, self-leisure management for well-being by using recreational activities. Additionally, assessing the perceptions of these two groups towards the activities and facilities that university are offering in order to discover if the activities and facilities are sufficient to encourage students' WLB and well-being.

2. Objectives

- To examine relations between work life balance and relevant context including well-being and leisure and recreation
- To assess the different students' perceptions towards the concept of work-life balance and the activities and facilities that university provide for.

Literature Review

3.1 Work-life balance, Well-being and Leisure and Recreation

The concept of work-life balance has been a concern since the 1980's in reaction to the unhealthy work-life choices that employees were making, struggling to find valued time for their personal life neglecting family, friends and leisure activities in order to carry out the work goals (Kumar and Shivakumar 2011). The imbalance of work and life has been considered as 'a problem that primarily harms individual life quality and well-being' (Kofodimos 1993; xvii). This problem was from working long hours and undertaking often overbearing

workloads (Kodz *et al.* 2002), eventually causing a high level of work stress and stress related illness (Jones and Bright 2001). Giving that concern, the term has later been broadened over various areas of work as the WLB programme of enhancing employee experience of work and non-work domains (Cascio 2000) by indicating the benefits to the individual employee, workplace and society of achieving a WLB (Greenblatt 2002; de Cieri *et al.* 2005; Popcock 2005; Bryson *et al.* 2007; McDonald *et al.* 2007; Fereday and Oster 2008). Those benefits include the tendency towards quality of life, mental health or well-being (Wong and Go 2009).

In relation to academia, WLB is also perceived as School-Work-life Balance (Matinez *et al.* 2013) and in the effective time management strategy of students by sharing the similar idea of achieving productive academic performance whilst having personal leisure time and activities to alleviate stress (Misra and McKean 2000). The over excessive focus on studying (Grund *et al.* 2014), excessive workloads and stress from related college or university's work are also indicated in students' perspective as affecting their ability to achieve their balance in life (Doble and Supriya 2011). Such problems concerning students over stressing with work are important to universities as several offer the facilities or centres with students' WLB counsellors such as University of Michigan, Johns Hopkins University and University of Illinois at Chicago. While other educational institutes also provide leisure and recreation facilities, as both are referred to increase the well-being of students, quality of life (Lloyd and Auld 2002), stress prevention (Coleman 1993; Coleman and Iso-Aloha 1993; Trainor *et al.* 2009) and self-development (Trainor *et al.* 2009).

Leisure, itself has a variety of meanings; in general it concerns 'free time' and 'free choice' of activity (Kraus 2001) and the opposite to work (Dumazedier 1967; Torkildsen 2005). While recreation, has a wide range of definitions, it has an involvement with recreation as recreation activities which should contain aspects of 'relaxation', 'fun' and 'pleasure' (Torkildsen 2005) are activities in which people participate during their leisure time as an approach of improving social cohesion and quality of life (Torkildsen 2005). Together, they are perceived as an effective approach in developing a mentally healthy student life that have freedom of choice concerning their own areas of interest and attending recreational activities (Yildiz *et al.* 2012). Scott and Willits (1998) classify leisure activities as socialising with friends or relatives; participating in creative or artistic activities; reading or studying; participating in sports and participating in fraternal or community organisation. Moreover, concerning the leisure and recreation among students, social network sites such as Facebook, Twitter and Instagram may also be included as it is the fastest growing and most popular of internet-based technologies with young people including higher education students (Roblyer *et al.* 2010). Regarding the function of social networks, it allows individuals to present themselves, establish or maintain connections with others (Ellison *et al.* 2007) alongside meeting with people with similar interests (Haythorhwaite 2005), therefore, social networks could possibly be grouped in a social perspective of recreation or as socialising with friends or relatives of leisure activities as previously reviewed.

3.2 The Context of Chulalongkorn University

In the context of Chulalongkorn University, even though a centre of WLB has not as yet been established, there are numerous factors which indicate that this university focuses on the well-being of its students more so than from the view of academic achievement; study-life balance implication, for instance, the university's policy of desired graduates needed well-being in physical and emotional perspectives along with other academic components (Chulalongkorn University Council 2010), CU Wellness and Health Promoting University which are the projects concerning happiness and well-being of academic staff and students in the university, and other recreation activities conducted by students including freshmen welcoming, sport day and student drama project. Moreover, the facilities regarding well-being reinforcement based on the typology of leisure previously as indicated, such as creative and artistic perspective; university provides Chamchuri art gallery and Chulalongkorn University Values Integration Program as known as CUVIP which offers a variety of extra-curriculum activities including creative activities; libraries and Information Technology support respecting reading or studying; common areas and public-WIFI access are available for socialisation with friends in persons or by social network; sport facilities including sport complex, health and recreation center and health services for physical recreation (Student Service and Facilities, Chulalongkorn University Official Website 2014); and lastly, volunteering projects and university clubs are conducted by a variety of faculties in order to encourage students to practice social responsibility and participation in interesting recreational activities in different clubs, which can be perceived as participating in fraternal or community organisation.

In summary, as well-being and the quality of life of students are largely hinged on their balance in life (Doble and Supriya 2011), and with the involvement of well-being and leisure (Trainors *et al.* 2009), therefore the specific hypotheses in this research were (1) students from Thai and International Program had similar perceptions towards the importance of WLB, nevertheless (2) from their difference of programmes, the pattern of WLB from time spending were different as well as their stress and well-being levels and leisure and recreation for encouraging their WLB. (3) They also had different perceptions of leisure and recreation facilities offered by the university which Thai programme perceived more positively than international programmed students.

4. Methodologies

4.1 Populations

There were 65 respondents of Thai and International programmed students from Chulalongkorn University who have registered in the second semester of the academic year of 2013. Background information on these respondents is shown in findings section.

4.2 Methodology and Procedure

The questionnaires and open-ended questions developed by the researcher were employed to achieve study objective regarding WLB in 17 items (13 items of rating scale and 4 items of opened ended questions). The content of the questionnaires were investigated for validity by 3 expertises in well-being and recreation and are represented in the index of item objectives congruence (IOC) equivalent as 0.82. The reliability of questionnaires by indicating Cronbach's Alpha Coefficient at 0.78 The procedure of methodology started by 1) Studies of theories, principles from relevant documents and researches; 2) Indication of structure of WLB evaluation form by covering contents in order to develop questionnaires and submit to expertises considering the validity; 3) Questionnaires pilot study regarding the reliability of questionnaires and; 4) data collection and analysis and research's results report. Research methodology was conducted during November 2013 to February 2014.

4.3 Data Analysis

Samples responded their opinions towards a Likert Scale. Then, data was processed by statistical programme software which indicated frequency percentage, mean and standard deviation. The research used t-test (two-tailed) in order to investigate a difference between two means of two normal population: independent samples. Following the previous phase, thematic analysis was used to group the data from rating scale and further comments into the following categories: daily time spending and factors influencing unwell WLB, leisure and recreation activities consumption and extra-curricula activities that the university has provided in order to encourage students' WLB. Thereafter, all collected data was interpreted and analysed for the broader objectives of these studies.

5. Findings

Sixty-five questionnaires were completed by the students from various faculties (Architectures, Arts, Commerce and Accountancy, Economics, Education, Engineering, Psychology, and Science including Office of Commission on Agricultural Resource Education) studied the subject of WLB in the courses of Introduction to Recreation (32 Thai Programme Students) and Effective Career Management (33 International Programme Students). It revealed that the gender ratio of the participant was 61.5% female (40 of samples) to 38.5% male (25 of samples) and student year ratio were 26.2% 1st year (17 of samples), 27.7% 2nd year (18 of samples), 33.8% 3rd year (22 of samples) and 12.3% 4th year (8 of samples). The perceptions of students towards the WLB topics are presented as the statistical table in Table 1 as follows.

According to table 1, results indicated the items that students from Thai Programme agreed most were the item 1, 'I am aware of the importance of a work-life balance' ($\bar{X} = 4, SD = 0.73$), following by item 4, 'I am aware of the importance of a work-life balance for having well-being' ($\bar{X} = 3.96, SD = 0.59$) and item 9, 'I am aware

that leisure and recreation encouraging having better well-being' ($\bar{X} = 3.96, SD = 0.76$) in the same mean. On the other hand, International Programme students agreed most in the item 9, 'I am aware that leisure and recreation encouraging having better well-being' ($\bar{X} = 4.21, SD = 0.74$), following by item 1, 'I am aware of the importance of a work-life balance' ($\bar{X} = 4.12, SD = 0.70$). Comparison of perceptions between two groups, it represented only difference at Item 11, 'University offers activities and facilities relevant to recreation and work-life balance in order to have well-being' which the statistical significance was 0.05 ($t = .017^*$). The overall results were discussed by using three themes regarding WLB of Chulalongkorn University from questionnaires' open-ended questions and can be categorised into 3 groups which are

4.1 Perceptions towards WLB Importance

The findings revealed that concerning the awareness of WLB importance itself, WLB as encouraging well-being and WLB as pressure and stress control (Item 1, 4 and 6 respectively), both of Thai and International programmed students had high agreement of those items. Nevertheless, in practice, as shown in item 2, 5 and 7 and 12; both of group least agreed that they are actually able to balance work and personal life. There was no statistical significance between the two groups among these topics, however, overall Thai students perceived they can balance work and life ($\bar{X} = 3.44, SD = 0.70$) over international programmed students ($\bar{X} = 3.39, SD = 0.90$). Regarding the open-ended section, in the daily time spending and factors influencing a poor WLB, both of groups indicated that they spent time in lectures and with academic work including commuting time to university most by average of 14 hours a day, while personal time as sleeping, time spending with family and friends, leisure and recreation, and so on are the rest, for 10 hours a day, it was revealed that students had spent that time in work and work related aspects more so than with personal time. Moreover, the statistic table also indicated that Thai programme students agreed to living nearby university to minimise commuting time ($\bar{X} = 3.70, SD = 1.41$) over international students ($\bar{X} = 3.12, SD = 1.29$) in item 3. While other factors expressed by students from different groups similarly indicating that their WLB was adversely affected by poor time management in the majority of comments, followed by dealing with an overload of assignments, the distance of commuting from accommodation to university and part-time work respectively. Numbers of students in open-end section also indicated that understanding and practicing the concept of WLB to be essential to ensure an optimal and valued life as well as the development of knowledge and skills from the educational system.

Table 1: The perceptions of students towards the work-life balance topics

Items	Topics relevant to work-life balance	Thai Programme		International Programme		t-test (two-tailed)
		\bar{X}	SD	\bar{X}	SD	
1.	I am aware the importance of a work-life balance	4.00	0.73	4.12	0.70	.739
2.	I have enough time after studying to carry out personal matters including spending time with family and friends	3.30	0.91	3.42	0.90	.850
3.	I live nearby university to minimise the commuting time	3.70	1.41	3.12	1.29	.118
4.	I am aware of the importance of a work-life balance for having well-being	3.96	0.59	3.91	0.80	.743
5.	I have well-being from a work-life balance	3.52	0.70	3.33	0.74	.359
6.	I am aware of Importance of Work Life Balance for pressure or stress control	3.93	0.78	3.91	0.72	.623
7.	I can manage my pressure or stress control from a work-life balance	3.48	0.75	3.33	0.85	.209
8.	I am aware that leisure and recreation encouraging having a better work- life balance	3.81	0.74	4.03	0.81	.756

9.	I am aware that leisure and recreation encouraging having better well-being	3.96	0.76	4.21	0.74	.424
10.	I have time to participate in leisure and recreation activities to encourage my work-life balance and well-being	3.48	0.70	3.76	0.83	.503
11.	University offers activities and facilities relevant to recreation and a work- life balance in order to have well-being	3.44	0.70	3.06	0.83	.017*
12.	From studying in work-life balance topic, I am more aware of balancing my study and life for better well-being	3.67	0.62	3.91	0.77	.474
13.	Overall perception about work-life balance I feel my work-life is balanced	3.44	0.70	3.39	0.90	.713

* $p < 0.05$

4.2 Leisure and recreation activities participation in order to encourage WLB and Well-being

Similarly to the previous theme, there was no statistical significance between the different groups, concerning item 8, 9, 10. Both groups, again, agreed in the similar levels that more awareness of leisure and recreation would encourage WLB and Well-Being in item 8 and 9, however, it was revealed in item 10 that they agreed less in having time to participate in those leisure and recreation activities to which international programmed students agreed ($\bar{X} = 3.76$, $SD = 0.83$) more than Thai ($\bar{X} = 3.48$, $SD = 0.70$). Regarding the open-ended section, leisure and recreational activities daily input differed as Thai student programmed indicated the use of social networks the most, followed by game playing and music listening. On the other hand, international students participated in watching TV, engaging in sport activities and playing games mostly at the same level, followed by time spent on social networks and other activities including eating out, clubbing, and meditation.

4.3 Extra-curricula activities that university has provided in order to encourage students' WLB

According to table 1, item 11 was only item that had the statistical significance which was 0.05 ($t = .017^*$), it revealed Thai programmed students had significantly higher level of agreement that the university offers activities and facilities relevant to recreation and work-life balance in order to foster well-being ($\bar{X} = 3.44$, $SD = 0.70$) compared to International programmed students ($\bar{X} = 3.06$, $SD = 0.83$) which the result can be evidentially supported by the open-ended section as a number of students suggested that there was not sufficient information regarding facilities and activities for international students by faculty or university. Moreover, this open-ended section also revealed the different perceptions towards extra-curricula activities that have been conducted by university or faculty; the activities that Thai students perceived could encourage their WLB the most were volunteer camping, followed by a sport complex and other sport facilities then university's clubs. On the other hand, most international programmed students indicated an international sport game event, followed by a freshmen welcoming event and volunteer camping subsequently.

6. Discussion And Conclusion

The results of this research indicated a match with the hypotheses, it can be concluded that both of Thai and International programme students of Chulalongkorn University have been aware of the importance of WLB and the influence of it in order to maintain their well-being which is one of the characteristics of a desired graduate including the importance of leisure and recreation as an approach towards a WLB for well-being maintenance (Godbey 1999) and as a stress buffer (Coleman 1993; Coleman and Iso-Aloha 1993; Trainor *et al.* 2009). However, they were able to balance their work and life to promote well-being yet expressed less ability to lower pressure and control stress in practice compared to their awareness of its importance mainly because of poor time

management as previously noted in the literature review of student WLB obstacles (Matinez *et al.* 2013) along with an overload of assignment work (Doble and Supriya 2011). Despite this, the two groups indicated different leisure and recreation activities for their WLB as Thai students spent most of their time in Social Network, while international students engaged the most in watching Television, games and sport activities. Another difference from comparative study was the perceptions towards activities and facilities offered by the University relevant to recreation and work- life balance in order to encourage and maintain well-being; higher numbers of Thai students agreed that those facilities and activities especially volunteer camping a recreation that allows students to practice community service and participation in the area camp was perceived to be possibly the most encouraging activity towards a WLB. Whilst the majority of international students perceived that socializing recreational activities by university offered more, such as international Chulalongkorn sport games as they acknowledged that they can get to know new friends and encourage their networking abilities. As leisure is a matter of 'free choice' and 'free time' (Kraus 2001), hence it is not surprised that students had different leisure and recreation activities in order to balance their work and lives to sustain a positive quality of life (Torkidsen 2005) from their freedom of choice. Hence, the component of well-being as a desired characteristic of graduates has been perceived and adapted through the inclusion of leisure and recreation although it is difficult to participate sometimes due to the indicating factors.

Nevertheless, the results also revealed a problem concerning the limited promotion of recreational activities and facilities conducted by the university as indicated by international programme students. They commented that they barely knew about the recreation programs the university provides. Moreover, numbers of students commented in the open-ended question that they would like the university to provide new activities as well as the existing ones, when asked 'which extra-curricular activities that are not already conducted by the university and that could encourage WLB would you want?'; students replied with such activities as handicraft projects, yoga, meditation classes and so on. Consequently, relevant units that are conducting these activities should be publicised and stronger promotion on a wide range of activities should be emphasised.

Acknowledgements

The researcher would like to thank all of students who were engaged in the studies and helped to complete this research successfully.

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Assessing participant performance in online professional development training programs

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Abstract

In the United States, professionals in many disciplines are required to remain current in their field by completing training courses to obtain continuing education units. Traditionally, face to face professional development training has been designed to teach workplace skills and could include laboratory segments and activities where instructors observe participants' involvement. Satisfactory completion is assessed using true-false or multiple choice tests. Today, instructional designs using on-demand distance-based professional development training are widely promoted, but how participant performance is measured is not standardized. The issue is particularly important in online courses containing innovative simulated laboratory activities where participant choices and actions in virtual workplace scenarios must be evaluated. In this paper, methods used to assess participants' decision-making and higher-order thinking skills are discussed and effectiveness measures are presented. The paper concludes with a summary of how these assessment methods can be implemented by organizations responsible for licensure and professional development credits.

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Peer-review under responsibility of the Sakarya University.

Keywords: distance education; instructional design; new learning environments; professional development

1. Introduction

Since the 1960s, employers have recognized and pursued the need for employee training for improved job effectiveness. As the workplace evolved, likely driven by improvements in automation and manufacturing technology, the skillset of workers had to be updated beyond the entry-level requirements offered by colleges and schools. Traditionally, these increases in worker capability were learned “on the job,” but significant and rapid changes required specialized training programs to acquire particular skills. Because these needs arose simultaneously in multiple industries in the United States, a coordinated approach was a natural response.

The American National Standards Institute (ANSI), which is an industry organization represented numerous manufacturing sectors, led the coordination and helped establish the International Association for Continuing Education and Training (IACET). It was well recognized that training programs were needed, but there were no quality controls in place. There was no way for employers to determine if employees participating in training programs were in fact benefiting from them (and therefore benefiting their employers). The IACET organization was given the major charge of developing standards and requirements for training programs so that employee participation could be tracked and their effectiveness could be evaluated. Clearly, workers that had more “up to date” skillsets were more valuable than those who did not, and the system of continuing education units (CEUs)

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was developed to give individual workers “credit” for having greater skills. These credits were essentially part of the resume of the worker, and it was important that they be transferable between employers in the same way as any other education credentials (e.g., a university diploma), even on an international scale.

The mission of IACET is clearly complex in nature and has evolved since its formation. Advances in education and training methods and the training content have changed significantly in the last 50 years and the various criteria developed by IACET have changed accordingly. Modern training methods are largely electronic and many are off-line programs designed to allow worker participation at their own pace on their own schedule. The days of “face to face” training programs with their “question and answer” assessment methods are largely over, but their departure brings new challenges for quality control in on the job training. In this paper, historical learning models, training methods, and assessment techniques are reviewed to provide context. Based on this background, modern simulation-based training methods are described and the unique opportunities they offer across multiple disciplines are presented. Special attention is given the assessing the effectiveness of these new methods so that employers can continue to know that their employees have the appropriate skills for their job responsibilities.

2. Learning Models and Assessment

Training methods, regardless of content, will only be effective if they are consistent with the manner in which people learn information. A key concept is “what is learning?” In some instances, learning is simply the act of memorizing facts. In other cases, learning is a much more complex process that ultimately requires the acquisition of facts, the ability to assimilate the facts into a plan, and the subsequent implementation of the plan. It is clear that the responsibilities of a particular job could require any type of learning, from the simple to the complex. With employers desiring to insure the effectiveness of whatever training method is chosen, assessment can become a unique challenge, especially for complex learning requirements.

To provide consistency and measurable cognitive learning outcomes, Bloom’s Taxonomy is an accepted guideline. Bloom’s Taxonomy was created in 1956 under the leadership of educational psychologist Dr. Benjamin Bloom in order to promote higher forms of thinking in education, such as analyzing and evaluating, rather than rote memorization. Bloom’s Taxonomy is divided into the following six categories to guide the development of learning outcomes for training courses:

1. Knowledge – repeat/remember previously studied information.
2. Comprehension – demonstrate an understanding of the facts.
3. Application – apply knowledge to actual situations.
4. Analysis – break down ideas into simple parts; find evidence to support generalizations.
5. Synthesis – compile ideas into a new purpose or propose different solutions.
6. Evaluation – make and defend judgments based on given evidence.

The requirements of early workforce training programs largely focused on the first few of these six levels. Any employee improvement was considered “good” and was readily accepted as a valuable skillset addition. This acceptance of simple learning fit perfectly with the training methods at the time where instructors would deliver training content to participants in a face-to-face environment in the typical classroom setting. Assessment of learning was equally simple; basic question-and-answer instruments could quickly and easily be used to evaluate whether or not a participant was “learning” the content. Both the skillset improvement requirements and the training methods of today are vastly different, and dramatically different assessment methods are required.

3. The Evolution of Training

As workplace skills advanced, it became necessary to move “learning” beyond the basic levels of Bloom’s Taxonomy and incorporate application, analysis, synthesis, and evaluation. At the same time, many needs remained for training at basic levels. The key differentiator in these training programs is what the participants are expected to be able to do with the information they receive. These different expectations require different assessment methods in order to evaluate program effectiveness. In order to assess the lower levels of Bloom’s

Taxonomy (knowledge and comprehension), true/false, multiple choice, or fill-in-the-blank questions are typically used. If the same content is presented, but with higher-level expectations, it is essential to re-design these types of questions in such a way that the participant has to apply the knowledge they have “learned” as opposed to rote memorization or simply finding the answer to the question in the previous text.

Consider the following examples of how most traditional true/false and multiple choice questions can be re-designed to become questions that assess the participant’s higher-order thinking skills. A traditional (lower level assessment) question might consist of a fill in the blank query followed by a set of answer choices:

The three power bases are _____:

- a. knowledge, educational, and textbook*
- b. positional, personal, and knowledge*
- c. educational, experiential, and practical*

Participants could complete such questions and demonstrate only the basic level of learning according to Bloom’s Taxonomy. They could show that they have acquired knowledge (recall facts from content), but they do not demonstrate any of the concept relationships associated with higher-level learning. If the expectations of the training are at a higher level, the participant’s mastery of the same content must be assessed differently. The assessment method can still be a question/answer instrument, but it must be formulated differently. A reformation of the previous (simple) question might be:

John works as a computer programmer. He is known for his multi-colored hair styles, casual dress, and body piercings. He is a talented programmer who works well with his peers. John’s style is expressed through which power base?

- a. Knowledge*
- b. Personal*
- c. Positional*
- d. Educational*

Considering Bloom’s Taxonomy, the participant must demonstrate application of the power base concept and the context of the assessment instrument uses scenarios consistent with real-world applications and situations.

Regardless of the learning level being targeted, alternative assessment methods such as discussion questions can also be used where the participant is scored based on the percentage of “key words” they include in their answer. The key words are provided by the instructor. As an example from an actual industrial training course in the area of food safety, participants are given “textbook” material to study about the differences between various types of eggs. Traditionally, a series of true/false or multiple choice questions would be asked to assess a participant’s ability to differentiate between the types of eggs. Alternatively, the participant could be given pictures of the cartons one would find the grocery store of the different egg types and the following question could be asked based on the pictures: *“Now that you know how to distinguish between different colored eggs, pasteurized eggs and eggs produced by hens fed special diets, describe to a consumer what is found in each of the following cartons.”* With this instrument, the assessment of the participant is not at the lowest level of Bloom’s Taxonomy (knowledge), but instead becomes a question assessing comprehension.

As demonstrated via these simple examples, it is clearly possible to provide content and require different levels of learning mastery depending on the needs and expectations of a particular situation. All of this is well understood in the traditional face-to-face training environment and has been utilized for many years to provide effective results. In modern times, however, training in this traditional setting is becoming more difficult for many reasons and the traditional classroom environment is quickly being replaced by a variety of methods using electronic methods and media. These so-called virtual learning environments are clearly the future of continuing education and it is essential that assessment methods suitable for the desired level of learning be developed and applied.

4. Virtual Learning Environments

Online education and materials were presented over the Internet before home computers became popular. In the 1960's, a group of scientists from the University of Illinois created a classroom system using linked computer terminals. While this first online learning experience (now called E-learning) did not compare to the online learning environments of today, it was a landmark experience in online education. Before that time, distance learning was offered by organizations and individuals through mail. Today, a virtual learning environment (VLE) is becoming the norm for many training programs. A VLE is a system that creates an environment designed to facilitate instructor management of educational courses for participants, especially a system using computer hardware and software, which involves distance learning. A virtual learning environment is often referred to as a learning management system (LMS).

Innovative online courses and educational games are two examples that allow learning at any time and in any place. Emerging technology is transforming not only the way participants learn but also the way instructors track data about how the participants study, use, and learn the content. The nature of these new media allow collection of massive amounts of information about any topic and allows the participant to be actively involved in decision-making tasks similar to those situations in their workplace where learning is more interesting and realistic than reading a textbook. Through interactive technology, learners can take what they have learned and make decisions leading to consequences. If choices are wrong, they start over—without harming someone or costing a company thousands of dollars. Depending on whether the online training is presented in textbook, simulation format, or game format, different forms of assessment methods are needed and learning outcomes should be uniformly stated.

An emerging training platform that is useful for promoting higher-order thinking skills according to Bloom's Taxonomy is based on training simulations. The simulation environment allows learners to visualize and interact with specific techniques, as well as apply facts and information they have learned from foundational courses. Learners are able to access and interact with the simulation on their own devices including desktop computers, laptops, tablets, and even smart phones. The assessment includes measuring the simulation's impact on material retention by tracking the participant's movements and actions throughout the simulation as well as their reactions to "pop-ups" that appear which require them to apply and synthesize the information based on what they have encountered. Simulation training is very useful because participants are provided "real world" scenarios that can be navigated and problems solved in the most realistic environment possible.

One alternative assessment method for simulation-based training is the multi-trait rubric. The multi-trait rubric allows the instructor to assess performance in multiple areas rather than just one and several aspects can be scored individually. The advantage to using a multi-trait rubric in simulation training courses is that the multiple content areas that are most closely associated with a complex task can be assessed. For example, within a simulation module where participants are asked to describe a scenario or specific location in a room in enough detail for a listener to choose it from a set of similar pictures, a multi-trait rubric would include recognition of different content areas such as landmarks in the room, what is out of place, or what is missing.

5. Sample Gaming Platform for Training

As a demonstrative example of the use of game-based training programs, consider a program design by Auburn University's Food Safety Institute (AUFSI) for inspectors in the poultry industry in the United States. The game is built on a template to be used for development of other games and is designed to collect data on how learning progresses and why decisions are made. The player is a food safety investigator working in a fictional region of the United States who is able to advance his or her career while solving contamination mysteries and protecting the public from foodborne illness outbreaks. Each outbreak is defined by a "scenario," the series of variables and details that defines the outbreak. As the player progresses through the simulation training game, the difficulty increases, the amount of help decreases, and rewards increase.

One of the goals is to teach users how to solve increasingly difficult problems on their own. Solving an outbreak requires understanding of real facts and application of actual methodology. The player needs to follow

the clues—from symptoms to illnesses, illnesses to causes, and causes to the source. The player gets significant assistance through the first few outbreaks, being taught exactly what to do and why. As the training progresses, the player must solve problems without help and alternative assessment is used to determine their problem-solving strategies and comprehension of the material through application activities. The learning outcomes from this type of learning environment support the higher-level learning areas (application, analysis, synthesis, and evaluation) of Bloom's Taxonomy. Samples from the gaming platform, followed by an explanation of how various assessments are inserted as “pop-ups” throughout the game, are shown in Figures 1- 3 that follow.

Locations

Locations are places that are important to gameplay. Each incident links to a location and additional locations can be discovered by interviewing characters or studying objects. Locations each have objects to study and characters to interview. Tapping an object causes your animated avatar to walk over to the object or character to interact with it.



Figure 1. Sample of Locations within gaming environment

Objects

Locations can have several objects in them which can be studied, such as refrigerators and cutting boards. Studying objects can give clues about the cause of the outbreak and lead to new locations, but can also be misleading.



Figure 2. Sample of objects within the gaming environment

Characters

Characters are not only the sick, but also employees, bystanders, and witnesses. Not every character is important, but any of them could be the key to solving the outbreak.



Characters are found in most locations and can be interacted with similarly to objects.



Figure 3. Sample of Characters within the gaming environment

The simulation environment allows the participant to navigate through the workplace environment and click on different areas. A pop-up appears giving them the option to “learn more facts” or “answer a question.” A sample question for the first figure (location) environment would be: “Click on three areas where you identify a food hazard and give a brief explanation of why the area does not follow standards.” Not only is the instructor able to track the participant’s movements through the virtual environment, points are given based on how many areas are correctly identified and their explanation is scored based on the number of keywords they use in comparison to those provided by the instructor. A sample question for the second (objects) environment would require the participant to understand the factors contributing to a food hazard, their ability to choose the correct factors, and then provide valid data that supports there is a food hazard problem. In the third environment (characters) figure, the participant is given points based on the questions they ask the characters. The instructor is able to assess the participant’s understanding of the material by the different questions they choose to ask. Points are given based on the validity of their questions toward solving the problem. Additional points are given based on the instructor’s evaluation of the course of action they took. Finally, the participant’s final conclusion or ability to solve the problem correctly results in points toward their final evaluation for the training program.

6. Conclusions

Continuing education has changed significantly over the past 50 years, particularly in terms of learning expectations and content delivery mechanisms. Modern training approaches, derived from gaming and simulation, offer significant improvements over the traditional face-to-face methods and assessment techniques have evolved to allow evaluation of learning based on Bloom's Taxonomy. The food safety example presented in this paper is only one area where such visualization-based and interactive scenario training is extremely attractive. Areas associated with situational awareness, such as workplace safety, fire protection, and hazard avoidance, where certain (simulated) activities can be presented are particularly well-suited for simulation-based training.

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Assessing reading and spelling abilities from three different angles – correlations between test scores, teachers' assessment and children's self-assessments in L1 and L2 children

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Abstract

Aside from by standardized tests, students' reading (decoding, reading comprehension) and spelling abilities can also be assessed by teachers or by self-assessment. This study investigated the correlations of these three types of assessment, taking children's L1 into account. Analyses revealed that, for L1 ($n=317$) and L2 ($n=247$) children, teachers' assessments moderately correlate with test results and do not differentiate well between the abilities. Children's self-assessments showed lower correlations. Additionally, comparing L1 to L2 children, lower correlations were shown when L2 children assessed their decoding. Further analyses revealed that L2 children tend to overestimate their abilities. Results were discussed in the light of the importance of correct and distinct teacher judgements to provide individual support.

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Peer-review under responsibility of the Sakarya University.

Keywords: accuracy of teachers' assessments, accuracy of children's self-assessment, reading, spelling, L1 and L2 learners, elementary school

1. Introduction

1.1 Reading and spelling abilities

The most important skills to be acquired and practiced at elementary school are the children's reading and spelling abilities. These abilities are crucial for being able to come upon and process information successfully (David, 2010). This skill permeates the whole school career as well as the further work career (Duzy, Ehm, Souvignier, Schneider, & Gold, 2014) and therefore also plays a central role in personal well-being (EU High Level Group of Experts on Literacy, 2012).

Reading is quite a complex ability, divided into several sub-abilities. Decoding is one of the first abilities to be acquired and thus represents the *conditio sine qua non* of the reading development process (Klicpera, Schabmann, & Gasteiger-Klicpera, 2010). This ability can be subdivided into non-lexical and lexical decoding. As lexical decoding progresses, the number of words stored in the so-called mental lexicon increases. The fast and increasingly automatic retrieval of words from this lexicon eases and fastens the reading process and is required for efficient reading comprehension (Klicpera et al., 2010). The better developed this decoding process is, the more processing resources are available for reading comprehension (Perfetti, 1985). Decoding has been shown to be a strong predictor for word-level reading comprehension (Wagner et al., 1997).

Reading and spelling are two highly connected abilities as well. In her model of reading and spelling development, Frith (1985) assumes that spelling skills do not develop independently from reading skills. As shown before, especially in the early grades, spelling abilities are highly inter-correlated with reading skills (Bishop & Leonard, 2000; Cunningham & Stanovich, 1993).

In Austria, 20% of ten-year-old students do not even possess basic competences in reading, whereas just 5%

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show high performance in this area (e.g. Bergmüller & Wintersteller, 2012; Herzog-Punzenberger, Bruneforth, & Lassnig, 2013). Poor reading abilities in children lead to a high risk regarding the successful completion of their school career (Lonigan, Purpura, Wilson, Walker, & Clancy-Menchetti, 2012). Children with a different first language from the language of instruction (L2 children) show a higher risk for developing problems at school, as language is the foundation of most of the subjects (Herzog-Punzenberger & Schnell, 2013). Especially regarding reading acquisition, L2 children show more deficits than their L1 peers (Roberts, Sorajani, & Vaughn, 2010; Schabmann, Landerl, Bruneforth, & Schmidt, 2013). This could also be shown for L2 children in Austria. Approximately 30% of the differences in achievement between L1 and L2 children can be explained by differences in their family's cultural capital (Bergmüller & Herzog-Punzenberger, 2012).

Results like the ones mentioned are usually retrieved from international student assessments (e.g. PISA: Schwantner, Toferer, & Schreiner, 2012; or PIRLS: Suchaň, Wallner-Paschon, Bergmüller, & Schreiner, 2012), where information about reading and spelling abilities is typically obtained by using standardized tests. These tests are often quite time-consuming and can only be applied by especially trained people.

1.2 Accuracy of teachers' assessment

As the application of standardized tests is not very common in daily classroom life, teachers' diagnostic competencies are essential (Artelt & Gräsel, 2009). Teachers need to be able to determine students' abilities adequately in order to offer an appropriate learning environment for all children in the reading classroom (Kame'enui et al., 2006). Moreover, teachers' assessment of students' abilities can influence the development of these abilities. Schwab, Seifert and Gasteiger-Klicpera (submitted) demonstrated this effect specifically for the development of reading comprehension in second graders. As could be shown already, teachers are not always able to accurately assess the abilities of their students and tend to make inaccurate judgements about their students' reading abilities (e.g. Begeny, Krouse, Brown, & Mann, 2011). There are several biases in teachers' judgements of student performance. The Big-Fish-Little-Pond Effect (Südkamp & Möller, 2009), anchoring effects (Dünnebier, Gräsel, & Krolak-Schwerdt, 2009) or teachers' goals and expertise (Krolak-Schwerdt, Böhmer, & Gräsel, 2012) are just some of the possible biases. The correlations between teachers' assessment of reading and students' abilities measured by standardized tests can be described as moderate, although results are inconsistent (Begeny et al., 2011: $r=.43$ to $.58$, $p<.01$; Demaray & Elliott, 1998: $r=.82$; Karing & Artelt, 2013: $r=.34$, $p<.01$). On the one hand, research has shown that teachers assess more accurately when being asked to assess specific skills (Feinberg & Shapiro, 2009); on the other hand, more recent research suggests that global judgements of teachers have higher accuracy than task-specific judgements (Karing, Matthäi, & Artelt, 2011). Especially when reading and/or spelling abilities are impaired, teachers' assessments of these skills have only limited validity (Herzog-Punzenberger et al., 2012; Schmidt & Schabmann, 2010).

The fact that teachers sometimes tend to misclassify children regarding their reading abilities can lead to the assumption that teachers' judgements are occasionally influenced by certain child characteristics which do not necessarily influence the children's actual performance. Research showed that, in addition to emergent literacy skills, perceptions of classroom behaviour, too, had an influence on teachers' judgements: students who showed behavioural issues were judged to show poorer academic outcomes, regardless of their actual scholastic skills (Bennett, Gottesman, Rock, & Cerullo, 1993; Hecht & Greenfield, 2002). In a study examining the sensitivity of teacher ratings of L1 and L2 children for reading disabilities, Limbos and Geva (2001) found that only in the long term the accuracy of teachers' assessments was comparable for the two groups. However, when measuring the first time, sensitivity of teacher ratings were higher for L1 children. Hence, there was a tendency to misclassify L2 children as having a reading disability due to an overreliance on oral language performance.

1.3 Children's self-assessment

Abilities in reading can also be assessed from a different angle, namely through children's self-assessment. Since there is a close link between self-assessment and academic self-concept (Marsh & Craven, 2006), the children's perspective on their abilities should be taken into account. One aspect, which could influence children's abilities in general, is their self-concept of their own abilities. Schwab, Seifert and Gasteiger-Klicpera (submitted) showed that, especially for poor readers, the self-estimation of one's own abilities influences the development of reading comprehension. More specifically, it could be shown that how children perceive themselves in terms of reading abilities is significantly correlated with their reading achievements. In line with this, Spinath et al.

revealed that for predicting students' achievement in mathematics and English, the children's self-perception about their abilities played an important role (Spinath, Spinath, Harlaar, & Plomin, 2006). However, other studies revealed that if any inter-correlations between children's self-assessment and their standardized test-scores existed, they were only quite low ($r=.29$, $p<.05$; Lynch, 2012). With regard to Austria, studies showed that nearly 50% of the children in fourth grade have a positive self-concept about their reading abilities. Test scores, on the other hand, show that this self-perception is not necessarily accurate: e.g. 10% of Austrian fourth graders with rather poor achievement in reading tests are convinced of their reading abilities (Wallner-Paschon, 2012).

Children base their self-perception on different sources. Their perception is influenced by teachers' feedback about their performance or progress (marks, verbal feedback, etc.), by comparing themselves to their classmates (Hellmich & Günther, 2011) but also by other characteristics (e.g. gender and age: Bouffard, Marcoux, Vezeau, & Bordeleau, 2003). Moreover, training children's self-assessment can be used in the classroom as a kind of formative tool, if reinforced by the teachers (Bingham, Holbrook, & Meyers, 2010).

As research produced contradictory results about whether or not children are able to properly describe their competencies in the scholar context, researchers started to consider certain child characteristics (age, gender). Furthermore, studies began to differentiate between the domains (subjects at school) that were investigated. Considering this, only girls (2nd grade) showed significant inter-correlations between their self-perception of competence and their marks in reading ($r=.29$, $p<.05$) and mathematics ($r=.41$, $p<.01$). Later, in 3rd grade, boys showed inter-correlations in mathematics, but not in reading (boys: mathematics: $r=.30$, $p<.05$; girls: reading: $r=.32$, $p<.05$; mathematics: $r=.46$, $p<.001$) (Bouffard, Marcoux, Vezeau, & Bordeleau, 2003).

With respect to child characteristics, no results concerning differences in L1 and L2 children could be found.

1.4 Purpose of the study

Since the specification of the investigated domain apparently matters, in the present study, the domain of German language arts is to be examined. More specifically, in the present study, the accuracy of teachers' assessment and children's self-assessment of reading and spelling abilities at the beginning of third grade is to be investigated. Even though various studies exist focusing on this topic, none of these studies analysed if these assessments differ in their accuracy when considering the children's first language. Three sub-areas of abilities will be analysed, namely decoding, reading comprehension and spelling. The paper aims at addressing two groups of research questions. The first group concerns an overall view of the entire sample.

To that end, four different research questions related to the whole sample were asked:

1. How well do the different types of assessment (standardized tests, teachers and children) differentiate the three abilities (decoding, reading comprehension and spelling) in question?
2. How accurately do teachers assess their students in the above-mentioned abilities?
3. How accurately do children perceive themselves in the above-mentioned abilities?
4. Do teachers' and children's assessments about these three abilities correlate?

Further attention was given to examining whether there are differences regarding child characteristics. Thus, differences between L1 and L2 children were studied. Hence, in a second step, the same four research questions above mentioned were asked again, this time dividing the sample in L1 and L2 children (2nd group, research questions 5-8). The two groups (L1 and L2 children) were compared with regard to significant differences.

2. Methods

2.1 Sample

The sample consisted of 564 children who were in 15 different schools, distributed among 32 classrooms (therefore, 32 teachers). This sample was special in that all these classrooms had at least 30% of L2 children. The children were assessed at the beginning of the third grade (age: $M=8.4$, $SD=0.5$). 52.1% ($n=311$) of the children were boys and 47.9% ($n=293$) were girls. 44.5% ($n=269$ children) were L2 children. This group consisted of 22 different languages. The biggest language group among the L2 children was Bosnian, Serbian or Croatian with 9.3% of the children ($n=56$). 5.3% ($n=32$) spoke Chechen, 4.8% ($n=29$) Albanian, 4.3% ($n=26$) Turkish and 3.1% ($n=19$) Arabic as a first language.

2.2 Instruments and procedures

Reading and spelling tests

Standardized tests gathered information about the children's reading skills (divided into decoding and reading comprehension) and spelling skills. To assess decoding skills, the reading part of the *Salzburg Reading and Spelling Test* (SLRT II: Moll & Landerl, 2010) was deployed. The SLRT II is an individual reading test which assesses decoding of non-words and decoding of words. This way, the test allows a separate diagnosis of phonological decoding (sub-scale Non-word Decoding) and lexical reading (sub-scale Word Decoding). To assess the children's reading comprehension, the *Reading Comprehension Test for First to Sixth Graders* (Elfe 1-6: Lenhard & Schneider, 2006) was applied. This test measures three different levels of reading comprehension: word, sentence and text level. To get an overall reading comprehension score, raw scores of each level were z-transformed and a composite sum of the three z-scores was formed. Further analyses were conducted with this overall reading comprehension score. Spelling abilities were tested with the *Hamburg Spelling Test* (HSP 1-9: May, 2002). This test counts correctly written words and graphemes. For the present study, the number of correctly written graphemes was used for further analyses because they offer more precise information.

Teachers' assessments

Teachers assessed each child's decoding, reading comprehension and spelling abilities on a 4-point Likert scale (1=bad to 4=good) (e.g. "Please assess the child's spelling ability").

Children's self-assessments

Corresponding to a frequently used one-item measure in this research field, children were asked to assess their reading fluency (that highly corresponds to decoding skills) and reading comprehension as well as their spelling skills ("I read very fast."; "I easily understand stories I am reading."; "I am good at spelling."). Children were rating these statements on a 3-point Likert scale, ranging from total agreement (3) to total disagreement (1).

Table 1. Means and standard deviations of the test scores achieved, teachers' assessments and children's self-assessment of decoding, reading comprehension and spelling (N=564).

	<i>M (SD)</i>
Decoding score Non-words/ Words (items read per minute)	35.47 (11.15) / 52.25 (19.06)
Reading Comprehension score (z-score)	-.25 (2.85)
Spelling score (148 maximum possible)	132.6 (15.17)
Teacher-assessed Decoding (4-point Likert scale)	3.06 (0.91)
Teacher-assessed Reading Comprehension (4-point Likert scale)	3.15 (0.94)
Teacher-assessed Spelling (4-point Likert scale)	2.87 (0.96)
Children's self-assessed Decoding (3-point Likert scale)	2.47 (0.55)
Children's self-assessed Reading Comprehension (3-point Likert scale)	2.67 (0.53)
Children's self-assessed Spelling (3-point Likert scale)	2.66 (0.50)

Procedures

First, children had to rate their own abilities. Then, two standardized tests (reading comprehension: *Elfe 1-6* and spelling: *HSP 1-9*) were administered in the classroom. The size of the group was determined by the number of children in class (9-25 children). Thereafter, the decoding test (*SLRT II*) was administered individually. Meanwhile, the respective teacher filled out questionnaires about each child's abilities.

3. Results

3.1 Correlations within the entire sample

In order to analyse the relationships between standardized test-scores, teachers' and children's assessment, respectively (see Table 2), correlations were conducted. As the data were not normally distributed (only reading comprehension was), Spearman correlations were performed on the entire sample. Subsequently, correlations were compared. To find out if the correlations differed significantly from each other, Fisher's z-transformation was used according to Fisher's z-table (Sedmaier & Renkewitz, 2013, p.905).

To address the first research question, the inter-correlations within the three types of assessment were

analysed (see triangles in Table 2).

First, the *inter-correlations between the standardized test-scores* (see first triangle in the left corner, Table 2), are moderate to rather high ($r_s=.52$ to $.74$, $p<.01$). The highest inter-correlation was found between word decoding and reading comprehension ($r_s=.74$, $p<.01$). The lowest inter-correlation existed between non-word decoding and spelling, still being highly significant ($r_s=.52$, $p<.01$). The mean of these inter-correlations was calculated by using z-transformations ($\bar{z}=.74$; $\bar{r}_s=.63$).

Second, the *inter-correlations between teachers' assessments* (see second triangle in the middle, Table 2) of the three different abilities (decoding, reading comprehension, spelling) are also rather high, again all being highly significant ($r_s=.62$ to $.71$, $p<.01$). The mean was calculated (Fisher's $\bar{z}=.81$, $\bar{r}_s=.67$).

Third, the *inter-correlations between children's self-assessments* (see third triangle in the right bottom corner, Table 2) were analysed. In contrast to the two previously mentioned inter-correlations (within teachers' assessment and within standardized tests), the children's self-assessments only showed one highly significant inter-correlation (for decoding x reading comprehension: $r_s=.24$, $p<.01$). Still, the mean was calculated ($\bar{z}=.12$; $\bar{r}_s=.12$).

To find out if the inter-correlations within the three kinds of assessment differed from each other, means of the three inter-correlations were analysed by using following formula (Bortz, 1989, p.265):

$$z = (Z_1 - Z_2) / \sigma(Z_1 - Z_2); \sigma(Z_1 - Z_2) = \sqrt{\frac{1}{n_1 - 3} + \frac{1}{n_2 - 3}}.$$

Analyses showed that the mean inter-correlation of teachers' assessments ($\bar{r}_s=.67$) is not significantly higher ($\sigma(Z_1 - Z_2) = 0.05971$; $z=1.13$) than the mean inter-correlation of standardized tests ($\bar{r}_s=.63$). The mean inter-correlation of standardized test scores and the mean of inter-correlations in teachers' assessments are significantly higher ($z=10.36$ and $z=11.49$, respectively) than the mean inter-correlation of children's assessments ($\bar{r}_s=.12$). This means that test scores and teachers' assessment differentiate to the same extend, whereas children dissociate the three abilities to a higher extent. However, it might be that children dissociate the three abilities more than necessary.

Moreover, research questions two and three aimed at the accuracy of teachers' and children's assessment. Therefore their correlations with standardized test-scores were analysed (see upper squares in Table 2).

First, in order to answer *research question 2*, the correlations between *standardized test scores and teachers' assessments* (see square on the left) were analysed. Overall (see in bold within this square), these correlations with the corresponding test scores were of medium size but all highly significant ($r_s=.50$ to $.60$, $p<.01$). This means that teachers' accuracy is medium for all the assessed abilities. When looking separately at the three abilities assessed by teachers (see columns within this square), the following results were found.

In terms of decoding, teacher-assessed decoding x decoding test-score is not the highest correlation in the column. This shows that when teachers are asked to assess decoding, they do not distinguish this ability from reading comprehension and spelling. Besides, teachers' assessment of decoding correlates significantly higher ($z=2.41$) with the word decoding score ($r_s=.60$, $p<.01$) than with the non-word decoding score ($r_s=.50$, $p<.01$) of the standardized tests. This means that the teachers assess a general factor of reading and do not assess individual abilities. This may be especially crucial for children with dyslexia since they show very different profiles and need help in specific aspects according to their difficulties. For example, they often have special difficulties in phonological recoding and in decoding non-words.

Table 2. Correlations between decoding, reading comprehension and spelling; for all three types of assessment.

	<i>Standardized</i>			<i>Teachers</i>			<i>Children</i>		
	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
<i>Standardized</i>									
(1) Decoding	-								
Non-word/Word		.61**/.74**	.52**/.63**	.50**/.60**	.32**/.40**	.41**/.49**	.34**/.38**	.09*/.12**	.00/.02
(2) Reading c.		-	.62**	.63**	.60**	.58**	.33**	.20**	-.06
(3) Spelling			-	.57**	.42**	.60**	.28**	.10**	.02
<i>Teachers</i>									
(1) Decoding				-	.71**	.67**	.31**	.14**	.09*
(2) Reading c.					-	.62**	.24**	.20**	.01
(3) Spelling						-	.28**	.20**	.19**
<i>Children</i>									

(1) Decoding	-	.24**	.03
(2) Reading c.			.09*
(3) Spelling			-

N=564; Reading c. = reading comprehension; ** $p < .05$; * $p < .01$ two-tailed

With respect to the teacher-assessed reading comprehension, the correlation with the reading comprehension test score is the highest ($z=4.14$; comparing $r_s=.60$ with $r_s=.42$). This means that teachers seem to accurately assess reading comprehension and do distinguish this ability adequately from decoding and spelling. In spelling, a similar pattern as in decoding could be revealed. Even though teacher-assessed spelling x spelling test score represents the highest correlation in this column, it does not differ significantly from teacher-assessed spelling x reading comprehension test score. This shows that when teachers are asked to assess spelling, they seem to distinguish spelling from decoding, but assess reading comprehension simultaneously.

In conclusion, only teacher-assessed reading comprehension is depicting the same ability as reading comprehension assessed by standardized tests. In contrast, the other two teacher-assessed abilities (decoding and spelling) also depict abilities that are not corresponding. Therefore, it seems that teachers are not able to assess children's decoding and spelling independently from the other abilities.

Second, to answer *research question 3*, we analysed the correlations between the *standardized test-scores and the children's self-assessment* (see square on the right). In general (see in bold within this square), these correlations with the corresponding test scores were lower ($r_s=.20$ to $.38$; $p < .01$) than the correlations between the ones observed before (standardized test scores x teachers' assessment). This means that children do not assess their abilities as accurately as teachers do. When looking separately at the three abilities assessed by children (see columns within this square), the following results were found.

With respect to decoding, one could observe a similar pattern in the children's assessment as in the teachers' assessment. Even though the correlation between children-assessed decoding x decoding test score represents the highest in this column, it does not differ significantly from the other correlations in this column. This shows that when children are asked to assess decoding, they seem to assess not only decoding but also simultaneously reading comprehension and spelling. Unlike the teachers' assessment, children's assessment of decoding correlates equally with non-word and word decoding test scores.

Although the correlation between children-assessed reading comprehension x reading comprehension test scores represents the highest in this column, no significant differences could be found from the other correlations in this column. The same can be seen in children-assessed spelling which seems to correlate highest with spelling test scores, but there were no significant differences to the other correlations in this column.

In summary, the children's assessments never only correlate with the corresponding test scores but always with the test scores of the other two abilities as well. Thus, children are not able to evaluate their own decoding, reading comprehension and spelling abilities differentiated from and independently of the other abilities.

Research question four aimed at the *correlations between teachers' and children's assessment* (see bottom square in Table 2). In general, these correlations (see in bold within this square) are quite low ($r_s=.19$ to $.31$, $p < .01$). When looking separately at the three abilities assessed by children (see columns within this square), the following results were found. Only in one of the columns, a significant difference could be found. Teacher-assessed spelling x children-assessed spelling differed significantly ($z=3.05$) from teacher-assessed reading comprehension x children-assessed spelling but not from teacher-assessed decoding x children-assessed spelling. All in all, this means that teachers' and children's assessments partly coincide only when assessing spelling.

3.2 Comparison of L1 and L2 children

Regarding the second group of research questions (questions 5-8), namely whether there are differences in the questions between L1 and L2 children mentioned earlier, the very same correlations were performed, this time separately for L1 and L2 children (see Table 3).

In general, many of the patterns mentioned earlier could be observed again.

Firstly, looking at the inter-correlations within the different types of assessment (see triangles, Table 3), standardized tests (triangles on the left side) showed quite high inter-correlations in both groups (L1: $r_s=.57$ to $.78$, $p < .01$; L2: $r_s=.50$ to $.71$, $p < .01$). No differences in mean correlations of test scores between L1 ($\bar{r}_s=.67$) and L2 ($\bar{r}_s=.61$) could be found. This was also true for teachers' assessments (L1: $r_s=.56$ to $.65$, $p < .01$; L2: $r_s=.56$ to $.70$, $p < .01$, triangles in the middle). No differences in the mean correlations of teachers' assessments between

L1 ($\bar{r}_S=.65$) and L2 ($\bar{r}_S=.61$) could be found. Again in contrast to these high inter-correlations within test scores and within teachers' assessments, children's assessments (triangles on the right side) showed mainly non-significant correlations or they were significant but rather low (L1: $r_S=.22$, $p<.01$; L2: $r_S=.17$ to $.26$, $p<.01$). No differences in mean correlations of children's assessments between L1 ($\bar{r}_S=.17$) and L2 ($\bar{r}_S=.08$) could be found.

Like before, mean inter-correlations within standardized tests do not differ significantly from mean inter-correlations within teacher assessments. This is true for L1 and L2 children. However, mean inter-correlations within test scores as well as mean inter-correlations within teachers' assessments differ significantly from mean inter-correlations within children's assessments. This is true for L1 ($z=8.62$; $z=7.39$) and L2 ($z=6.25$; $z=6.96$).

In a second step, correlations of the L1 group (grey in Table 4) were compared with those of the L2 group (white in Table 4). Only those correlations concerning the accuracy of children's and teachers' assessment were of interest (bold in Table 3).

Table 3. Correlations between decoding, reading comprehension and spelling; for all three types of assessment; separately for L1 and L2 children.

	<i>Standardized</i>			<i>Teachers</i>			<i>Children</i>		
	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
Standardized									
(1) Decoding									
Non-word/word		.70**/.78**	.57**/.64**	.53**/.57**	.38**/.38**	.45**/.49**	.41**/.44**	.11*/.10	-.01/.00
(2) Reading c.	.58**/.71**		.64**	.59**	.53**	.53**	.45**	.15**	-.10
(3) Spelling	.50**/.61**	.61**		.59**	.42**	.61**	.28**	.08	.03
Teachers									
(1) Decoding									
	.49**/.55**	.58**	.53**		.65**	.62**	.37**	.13*	.06
(2) Reading c.	.32**/.39**	.54**	.41**	.70**		.56**	.34**	.16**	-.03
(3) Spelling	.40**/.46**	.53**	.56**	.66**	.56**		.37**	.16**	.19**
Children									
(1) Decoding									
	.26**/.31**	.19**	.27**	.24**	.16**	.16**		.22**	.00
(2) Reading c.	.05/.11	.19**	.09	.18**	.19**	.19**	.26**		.02
(3) Spelling	.01/.04	.00	-.01	.13*	.06	.22**	.07	.17**	

Reading c. = reading comprehension; grey= L1 children ($n=317$); white=L2 children ($n=247$); * $p<.05$ ** $p<.01$ two-tailed; correlations for further analyses **bold**

As can be seen in Table 4, only one significant difference could be found. Only the comparison of L1 and L2 children regarding the correlation between their test scores and self-assessments of decoding differed significantly. This was only true for the subscale Non-word Decoding but not for the subscale Word Decoding, although a trend was also seen in the latter.

Table 4. Differences between observed correlations; separately for L1 and L2 children.

	L1 ($n_1=317$)		L2 ($n_2=247$)		z
Standardized tests x teachers' assessment	r_{S1}	Z_1	r_{S2}	Z_2	
Decoding Non-word/Word	.53/.57	.59/.65	.49/.55	.54/.62	0.59/0.35
Reading Comprehension	.53	.59	.54	.60	0.12
Spelling	.61	.71	.56	.63	0.94
Standardized tests x children's assessment					
Decoding Non-word/Word	.41/.44	.44/.47	.26/31	.27/.32	1.99*/1.76
Reading Comprehension	.15	.15	.19	.19	0.47
Spelling	.03	.03	.01	.01	0.23
Teachers' x children's assessment					
Decoding	.37	.39	.24	.25	1.64
Reading Comprehension	.16	.16	.19	.19	0.35
Spelling	.19	.19	.22	.22	0.35

For the calculations $\sigma(Z_1-Z_2)=0.0853$ was used; grey= L1 children ($n=317$); white=L2 children ($n=247$); * $z>1.96$

To get further information about the differences, variance analyses were conducted for decoding, more precisely decoding test scores (Non-word and Word) and self-assessment of decoding. There was a significant difference between L1 and L2 children concerning their test scores in decoding ($F_{562,2}=9.63$, $p<.01$). Scheffé-tests revealed that this difference was only significant for the subscale Word Decoding and not for Non-word

Decoding. L1 children showed higher test scores ($M=54.43$; $SD=19.79$) than L2 children ($M=49.45$; $SD=17.71$).

4. Discussion

This study aimed at investigating the accuracy of teachers' assessment and children's self-assessment of the children's reading (decoding and reading comprehension, respectively) and spelling abilities. In addition, comparisons between L1 and L2 children were made to find out whether the correlations differ for L1 and L2 children.

Firstly, it was shown that these three abilities are highly inter-correlated. As expected because of the high predictive value of decoding for reading comprehension (e.g. Wagner et al., 1997) within standardized test scores, a rather high inter-correlation ($r_s=.74$, $p<.01$) between the subscales word decoding and reading comprehension could be shown. In addition, it could be shown that teachers' assessments of the three abilities (decoding, reading comprehension and spelling) inter-correlate as highly with each other as the standardized test scores do. This result indicates that teachers, to the same degree as standardized tests, do not completely distinguish the abilities. Concerning decoding and reading comprehension, high inter-correlations could be shown already. However, it was quite surprising that neither standardized tests nor teachers assess spelling independently from reading abilities. Perhaps one can argue that it could be proven already that reading and spelling abilities are closely related to each other. This is especially true for the first grades (Cunningham & Stanovich, 1993). The analysed sample was tested at the beginning of third grade, where obviously such inter-correlations still exist.

While teachers' as well as standardized assessment of the three abilities highly inter-correlate within the type of assessment, the children's self-assessed reading and spelling abilities only show rather low inter-correlations. This result suggests that children seem to distinguish more strongly between the three abilities. Comparing to the test scores and teachers' assessments, children might even perceive the three abilities in question as being too independent from each other.

Secondly, teachers' accuracy was analysed by relating teachers' assessment to test scores. It was shown that teachers do not always differentiate accurately between abilities. Teachers only showed accurate assessment when assessing reading comprehension. With respect to decoding and spelling, teachers did not show a differentiated view. In combination with the before-mentioned result, this finding suggests once again that differentiation by teachers is not based on a clear understanding of the students' learning process. Thus, teachers tend to assess some kind of general achievement in the subject German language arts. This seems to be enough if arguing that teachers just need to grade their children in the subject German language arts in a general way. Nevertheless, to properly support children in their reading and spelling acquisition, it is important to distinguish between these three abilities. The differentiation between abilities in decoding, reading comprehension and spelling is important to understand causes of failure in reading or spelling performance. To successfully identify children with potential problems, accurate teachers' assessments are crucial for their diagnostic competence of reading difficulties. Children with difficulties especially rely on a teaching approach that is well-structured in manageable steps (Schabmann et al., 2012). Adaptive and therefore effective instruction in the reading classroom influences the children's achievement and success at school (Karing & Artelt, 2013).

Another finding was that teacher's assessment of decoding correlates more highly with the subscale Word Decoding than with the Non-word Decoding test score. This result indicates that teachers focus more on lexical decoding than on phonological one. Yet, as phonological decoding is an important step in reading acquisition and the foundation of word reading and therefore reading comprehension processes (Perfetti, 1985), it is quite important to consider phonological decoding, too.

Looking at the rather low correlations between test scores and children's self-assessment, it seems that children at this age have no clear idea about their different abilities. This finding is underlined when looking at the low correlations between children's self-assessment and teachers' assessment. The highest correlation could be found between word decoding test scores and children-assessed decoding. This shows that children also seem to focus more on lexical decoding rather than on phonological decoding. Self-assessed spelling showed no significant correlation to spelling test scores. This result leads to the assumption that children have quite big difficulties in judging their spelling abilities. However, children's assessment of spelling correlates significantly with teachers' assessment of the same ability. This means that children and teachers agree more about the children's spelling abilities than children agree with test scores. This shows that children's self-assessments seem to be influenced by the teachers' opinions. Bearing in mind that research already revealed a tendency towards

misclassifications by teachers (Herzog-Punzenberger et al., 2012; Kame'enui et al., 2006; Schmidt & Schabmann, 2010), relying on teachers' judgements might entail the risk that children do not see abilities they actually have. However, the children's self-concept relates to their development concerning their abilities (Spinath et al., 2006).

With regard to the second group of research questions, namely if there are differences between L1 and L2 children, similar patterns could be found in general. First of all, teachers assess children's abilities in decoding, reading and spelling independently of the children's first language. This child characteristic does not seem to influence teachers' accuracy of judgement.

Still, one difference could be found concerning the children's self-assessment: L2 children show significantly lower correlations than L1 children between their self-assessed decoding and the test scores of the same ability. Further analyses revealed that L2 children tend to overestimate their abilities. In the subscale of word decoding, L2 children showed poorer achievements than their L1 peers. Yet, when looking at their self-assessment, they showed no significant differences. This means that L2-children perceive themselves as equally good at decoding as their L1 peers. However, test scores show a different picture: L2 children are weaker word decoders than L1 children. A similar phenomenon has been shown in adult L2 learners. The more advanced they are, the more accurately they judge their skills (Brantmeier, Vanderplank, & Strube, 2011).

It should be mentioned, however, that the present study has some limitations. The observed inaccuracy of teachers' assessment might be due to question characteristics concerning how teachers' judgement was asked for. The questions about the children's achievement were asked in a quite general way. Some research showed accuracy rising when asking teachers in a more specific way (Feinberg & Shapiro, 2009). In contrast, Karing and Artelt (2013) revealed that teachers showed more accuracy when assessing general abilities rather than specific ones. However, in further studies, more specific questions could be asked to see if the present results remain and if there are still no differences between L1 and L2 children.

Children's assessment only showed little accuracy. This could also be due to question characteristics. On the one hand, in order to ease the assessment for children, only a 3-point Likert scale was used. Maybe this was not enough to receive differentiated self-assessments. On the other hand, it might be questioned whether children at this age are able to understand the difference between the three abilities.

Another limitation that needs to be mentioned is that L1 and L2 learners were not comparable in some of their abilities. The higher scores of L1 children in the subscale Word Decoding could also be an artefact of different ability levels instead of being due to a different first language. This raises the question why the correlations between the three different assessments sometimes vary between L1 and L2. Maybe other characteristics that are relevant for scholastic abilities also exert an influence. Aspects like cultural capital, socioeconomic background or IQ should therefore be controlled in further research. In addition, L1 children in the present sample often belonged to a rather low socioeconomic background and might not represent the typical L1 children.

Further research should be conducted concerning L1 and L2 children's self-assessment in the area of reading. The different accuracy of children's self-assessment leads to the question of where this different self-perception stems from as well as where it might lead, and these questions need to be examined in further studies.

Acknowledgements

The authors gratefully acknowledge the cooperation and support of the federal state of Styria (Land Steiermark).

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Assessing the impact of open and distance learning (odl) in enhancing the status of women in Lagos State

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Abstract

This paper assessed the impact of open and distance learning (ODL) in enhancing the status of women in Lagos state, Nigeria. Using a survey research method, data were gathered through a structured and an open ended questionnaire from both single and dual mode institutions (NOUN and UNILAG respectively) in Lagos state. A total of two (200) hundred female students were randomly sampled out the population. The chi-square analysis was done at a 0.05 level of significance. Both the quantitative and qualitative results show that ODL significantly enhanced the status of women in Lagos state. Women also face different types of challenges on the ODL programme which inhibit them from enjoying the programme to the fullest. It is therefore recommended that women who did not have formal educational background should be encouraged to enrol for ODL programmes so that they can compete with their women counterparts who had formal educational background; challenges faced by women on ODL programmes should be straightly addressed so that more women could be encouraged to participate in the programme.

Keywords: open and distance learning, women status, national Open University {NOUN} dual mode, single mode, education.

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Peer-review under responsibility of the Sakarya University.

1.Introduction

Historically, women have occupied a very significant proportion of the human society. Nigerian census figure according to the Federal Government of Nigeria reveals that the women folk constitute over forty percent (40%) of the nation's population (Haruna, 2011). This figure reveals that the country cannot experience any meaningful development without the support of the women folk. Education is regarded all over the world as a basic tool for empowering, enhancing the status of women and bringing them into the main path of development. Education not only provides basic knowledge and skills for the women but it empowers women to take rightful place in society and development process, (FRN, 2004) since education is an instrument for national development. It is often said that if you train a man you train an individual but if you train a women you train a nation. Therefore women education serves as a fundamental human right and a developmental necessity.

Women empowerment is the development of mental and physical capacity, power or skills in women for them to operate meaningfully in their social milieu, thereby experiencing a more favourable level of social recognition and subsequently enhance their economic status.

The year 2002 UNICEF report stated that gender disaggregated data on education has revealed that compared to their male counterparts, women have, for the most part, attained only low levels of formal education. Despite its free education policy at all levels of schooling, access to education for all remained unattainable, more so for girls and women in some states in Nigeria like Sokoto and Zamfara, the female literacy rate is as low as 12 percent when compared to 59% for boys. The statistics indicated a wider gender disparity with 65.5% of male being literate as against 39.5% literate females. The following reasons as stated by Satayanarayana and Emmanuel (2009) are some of the reasons for educational backwardness of women in developing countries.

- General indifferences to the education of girls
- Social resistance arising out of fears and misconceptions that education might alienate girls from traditions and social values and lead to maladjustment, conflicts and non-conformism
- Early marriage and social inhibitions against girls pursuing education after marriage
- Prevalence of child labour among girls belonging to weaker sections and hard domestic chores which some of the unmarried girls are required to perform
- Prevailing notions that sole occupation of women is to bear children, look after her husband and children, and thus be restricted to domestic work
- Discrimination against women's labour in both organized and unorganized sectors in matters of recruitment, training and promotion
- Many girls and their parents find that school's curriculum does not conform adequately to their needs and interests
- Unsuitable and inflexible social timing and inadequate facilities for girls in schools particularly in co-educational schools

Egunjobi (2005) still contributing to the above assertions opined that women economic empowerment is low in Nigeria compared to their male counterparts. She said many women still live on menial jobs, most jobs they perform do not have economic values and all activities that does not require financial reward are mostly done by women. Akomolafe (2008) also opined that women have been politically enhanced by education. They are gradually occupying their rightful positions and awareness is being created that women should participate in partisan politics. Women have therefore been occupying various positions such as Ministerial positions, Senate, House of Representatives, State house of Assembly, Deputy Governors, and Commissioners etc. She stated further that women economic empowerment is too low in Nigeria. This is owing to the fact that resources which are of great importance in the life of women for the purpose of meeting their domestic and matrimonial commitment are inadequate and not available in most cases.

At the tertiary level, it is also obvious that the Nigerian traditional universities in totality cannot provide access to the number of applicants who intend to acquire university education in Nigeria. The fact still remains that the challenge of mass access to university education in Nigeria would continue to increase by the day as long as the higher education learning is tied only to admission into the four walls of the conventional universities, be it government or privately owned. Currently only 20 percent of Nigerian secondary school leavers have access to places at University in Nigeria, leaving many thousands without the chance to continue their education (Okebukola, 2008). Nevertheless, Nigeria has long been in search for appropriate measures of expanding its education programmes to meet its population growth and the increasing demand for tertiary education. Various efforts include the Universal Declaration of Human Rights, the 1981 UN convention on the elimination of All Forms of Discrimination against Women (CEDAW), the 1990 Jomtien Declaration on Education for All (EFA) and the 2000 World Forum on Education for All, especially the EFA 2015 goal. As one of the intervention to widen access to education, equality of basic educational opportunities as well as providing a second chance for women and girls who had never been or had once been in the system but had to dropout for one reason or the other. Also in line with its commitment to achieving gender equality in education by 2015 such that both males and females are assured full and equal access to good quality basic education, government is collaborating with stakeholders to promote programmes and activities towards elimination of gender gaps in education. Notable is the FGN/UNICEF/DFID Strategy for the Acceleration of Girls' Education in Nigeria. The strategy aims at 15% reduction in disparities (especially gender), through an inter-sectoral response and enhanced

linkages between programmes and directly addresses EFA (Okebukola, 2008). Another strategy government has laid down to bridge the gender gap is the promotion of Open and Distance Learning (ODL) which is the basis of this research. The goal of ODL as stated in Federal Republic of Nigeria (2004) National Policy on Education shall be to provide access to quality education and equity in educational opportunities for those who otherwise would have been denied.

Women perform triple roles - reproductive, productive and societal/communal responsibilities. They are perceived by society as managers of home and child minders. Their biological make up make them responsible for carrying babies during pregnancy. Mothers who are not fortunate to have responsible husbands are left with the sole responsibility of ensuring the total upbringing of their children which gives them extra financial responsibilities. The socio-cultural and biological roles affect their ability to leave home management and child care responsibilities for school. Working mothers who dare to pursue academic laurels are effaced with the challenging task of combining work, home/child care and studies. These factors point to the need for alternative modes of delivery of education that will meet the lifestyle of all women. With ODL women who have been derived formal education because of one reason or the other to have benefited immensely. An empirical example can be found in the number of women who have been empowered through completion of one programme or the other. Records from distance learning institute of the University of Lagos, Nigeria indicates that of the major programmes offered by the institute as at 2001, 2874 students offering administration degrees were women while 164 of the women offered science degrees. According to Baikie et al (2005) the National Teacher's Institute which trains teachers in order to improve the quality of nation's teaching force records that with the number of students enrolled for the NCE were 93,000 out of which 68,000 were women. For the Advanced Diploma and Postgraduate diploma programmes, the students enrolled were 8000 out of which 5000 were women; the pivotal Teacher Training Programme (PTTP) which was last offered in 2003 had an enrolment of 29,000 and 21,000 were women (NTI Kaduna, 2000); and the grade two teachers' certificate (TCII) programme designed for teachers who do not possess the TC II had an enrolment of 103,000 students and of which 77,250 were women. Also at the National Open University of Nigeria, a single mode university which started her open distance learning academic activities in 2004 and have records of those who have completed a post-graduate diploma programmes in various disciplines amounting to 2,341 while those who have completed masters degree programmes were numbered to be 4,182. Amongst these graduated women, 5,034 of them were full time housewives from different religious backgrounds including Islam, Christianity and other traditional religion (Temitayo, 2012).

With these figures, it is obvious that women inspite of their condition could access education and get empowered through ODL since this mode of education allows them to learn from home as house wives and study for a programme of their choice without neglecting their marriages and also enables them to contribute to the development of their various localities.

Purpose of the Study

The main purpose of this study was to assess the impact of open and distance learning in enhancing the status of women in Lagos State. Specifically the study sought to:

1. Assess the extent to which ODL has enhanced the status of women in different programme of study Lagos State?
2. Determine the challenges women face on the ODL programme.

1.2 Research Questions

The following research questions guided the study:

1. Does ODL enhance the status of women in different programme of study in Lagos State?
2. Do women face challenges on the ODL programmes in Lagos State?
- 3.

1.3 Hypotheses

Ho₁: ODL does not significantly enhance the status of women in different programme of study in Lagos State.

Ho₂: Women does not face any significant challenges on the ODL programme

1.4 Statement of the Problem

In Nigeria, the academic, social, economic, and political status of women has been lagging behind for ages compared to their male counterparts. In order for women to meet up with their male counterparts, the Federal government of Nigeria has set up various open and distance learning programmes which can serve as a major vehicle to break the vectors- access, quality and cost that has constrained education in order to improve women's

status, reduce their vulnerability and act as a starting point in their empowerment. As a result many women are studying on the ODL programme and hope to bag a certificate at the end of their programme. This paper therefore sought to find out whether the open and distance learning programme has helped increase on the status of women in Lagos State.

1.5 Methodology

Research Design

The study employed a descriptive survey research design.

Study Population and Sample

The study population of female students from single and dual mode institutions (NOUN and UNILAG distance learning centers respectively) was employed for the study. A total of two hundred (200) female students ranging from five schools (Sciences, Education, Arts and Social Sciences, Engineering and Law) were randomly sampled out of the population. The samples were selected in this order:

Institution	Sciences	Education	Engineering	Arts and social sciences	Law	Total
Victoria Island	20	28	10	25	07	90
NOUN	15	36	29	17	13	110
Total	35	64	39	42	20	200

Instrumentation

The instrument used was a structured and open-ended questionnaires designed by the researchers were given to colleagues in other departments for further face validation. They made corrections and modifications where necessary. The instrument has three sections (A, B and C) covering demographic information, impact of ODL in enhancing the status of women, and challenges women face on the ODL programme.

Reliability of the Instrument

The reliability of the instrument was tested by first administering them to twenty (20) students of NOUN. Then, the reliability coefficient of 0.81 was determined using Alpha Chronbach method.

Data Collection procedure

For easy collection of data from the two institutions, the questionnaires were given to the target students by the researchers and with the help of research assistants. The questionnaires were collected on the spot with minimal guidance since all the respondents are literate adults.

Data Analysis

The data collected were analyzed using frequency counts, percentages, cross-tabulation and the hypotheses were tested at 0.05 level of significance using Chi-square analysis. The SPSS package version 20 was used for the analysis.

1.6 Results

Based on the nature of the study, pertinent answers were given to some of the research questions and two hypotheses were tested using both quantitative and qualitative techniques to gather data for the study.

Table i: Socio-demographic characteristics of respondents

Variable	Category	Frequency	Percentage (%)
Age	30-39	52	26.0
	40-49	98	49.0
	50-59	43	21.5
	60 and above	7	3.5
	Total	200	100
Programme of Study	Sciences	35	17.5
	Arts and Social sciences	42	21.0
	Engineering	39	19.5
	Education	64	32.0
	Law	20	10.0
	Total	200	100
Type of Occupation	Teaching	64	32
	Health worker	63	31.5
	Banker	21	10.5
	Self Employed	30	15.0
	Others	22	11.0
	Total	200	100

From the table above, the larger percentage of the respondents are between the age of 34-49 (49.0%) and 30-39 (26.0%) while the lowest percentage is between the age of 60 and above (3.5%). Also 35 (17.5%) of the respondents are science students, 42 (21.0%) are in the arts and social science department, 39(19.5%) are in the engineering department, 64 (32.20%) are in the education department while 20 (10.0%) are in department of Law. The larger percentage of the sampled population are also teachers 64 (32%) and health workers 63 (31.5%) while 21 (10.5%), 30 (15.0) and 22 (11.0%) are bankers, self-employed and others respectively. This means that majority of the women on the ODL programme are mostly teachers and health workers who want to increase the status through ODL.

Answering of Research Question : Does ODL enhance the status of women in different programme of study in Lagos State?

Table ii: A cross tabulation on women's status in different ODL programmes

		Science	Arts and social science	Engineering	Education	Law
Has ODL enhanced the local bodies	Strongly Disagree	0 (0.0%)	2 (28.6%)	0 (0.0%)	5 (71.4%)	0 (0.0%)
	Agree	22 (23.4%)	21 (22.3%)	7 (7.4%)	35 (37.2%)	9 (9.6%)
	Strongly Agree	13 (13.1%)	19 (19.2%)	32 (32.3%)	24 (24.2%)	11 (11.1%)
	Agree	35 (17.5%)	42 (21.0%)	39 (19.5%)	64 (32.0%)	20 (10.0)
	Total					
Have you gained confidence in dealing with family	Disagree	0 (0.0%)	5 (100%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
	Strongly Disagree	4 (28.6%)	0 (0.0%)	0 (0.0%)	5 (35.7%)	5 (35.7%)
	Strongly Agree	11 (19.3%)	8 (14.0%)	30 (52.6%)	0 (0.0%)	8 (0.0%)
	Agree	20 (16.1%)	29 (23.4%)	9 (9.6%)	15 (12.1%)	51 (12.1%)
	Agree	35 (17.5%)	42 (21.0%)	39 (19.5%)	20 (32.0%)	64 (10.0%)
	Total					
I have achieved higher educational qualifications that increased social esteem	Disagree	0 (0.0%)	4 (100%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
	Strongly Disagree	0 (0.0%)	7 (41.2%)	0 (0.0%)	5 (29.4%)	5 (29.4%)
	Strongly Agree	20 (23.8%)	25 (29.8%)	7 (8.3%)	28 (33.3%)	4 (4.8%)
	Agree	15 (15.8%)	6 (6.3%)	32 (33.7%)	31 (32.6%)	11 (11.6%)
	Agree	35 (17.5%)	42 (21.0%)	39 (19.5%)	64 (32.0%)	20 (10.0%)
	Total					

It serves as second chance for the earlier dropout and the disadvantaged	Disagree Strongly Disagree Strongly Agree Agree Total	8 (42.1%) 0 (0.0%) 13 (19.1%) 14 (16.9%) 35 (17.9%)	2 (10.5%) 9 (34.6%) 8 (11.8%) 23 (27.7%) 42 (21.4%)	7 (36.8%) 4 (15.4%) 14 (20.6%) 14 (16.9%) 39 (19.9%)	0 (0.0%) 13 (50.0%) 19 (27.9%) 28 (33.7%) 60 (30.6%)	2 (10.5%) 0 (0.0%) 14 (20.6%) 4 (4.8%) 20 (10.2%)
It facilities the acquisition of variety of knowledge through the print and the non-print media	Disagree Strongly Disagree Agree Strongly Agree Total	0 (0.0%) 0 (0.0%) 18 (17.1%) 17 (22.4%) 35 (17.5%)	0 (0.0%) 9 (69.2%) 12 (11.4%) 21 (27.6%) 42 (21.0%)	6 (100%) 0 (0.0%) 18 (17.1%) 15 (19.7%) 39 (19.5%)	0 (0.0%) 0 (0.0%) 41 (39.0%) 23 (30.3%) 64 (32.0%)	0 (0.0%) 4 (30.8%) 16 (15.2%) 0 (0.0%) 20 (10.0%)
Enhanced access to legal literacy and information relating to women's right and entitlement in society so as to participate as an equal footing in all areas	Disagree Strongly Disagree Agree Strongly Agree Total	0 (0.0%) 4 (18.2%) 8 (11.4%) 23 (26.7%) 35 (17.5%)	11 (50.0%) 5 (22.7%) 4 (5.7%) 22 (25.6%) 42 (21.0%)	2 (9.1%) 5 (22.7%) 19 (27.1%) 13 (15.1%) 39 (19.5%)	9 (40.9%) 4 (18.2%) 25 (35.7%) 26 (30.2%) 64 (32.0%)	0 (0.0%) 4 (18.2%) 14 (20.0%) 2 (2.3%) 20 (10.0%)
I am able to develop ability to think critically	Disagree Strongly Disagree Agree Strongly Agree Total	23 (74.2%) 4 (19.0%) 6 (8.6%) 2 (2.6%) 35 (17.5%)	4 (12.9%) 4 (19.0%) 21 (30.0%) 13 (16.7%) 42 (21.0%)	0 (0.0%) 5 (23.8%) 15 (21.4%) 19 (24.4%) 39 (19.5%)	4 (12.9%) 4 (19.0%) 17 (24.3%) 19 (50.0%) 64 (32.0%)	0 (0.0%) 4 (19.0%) 11 (15.7%) 5 (6.4%) 20 (10.0%)
It changes socialization process	Disagree Strongly Disagree Agree Strongly Agree Total	15 (57.7%) 2 (10.0%) 4 (4.7%) 14 (21.2%) 36 (17.5%)	4 (15.4%) 9 (45.0%) 7 (81.0%) 20 (30.3%) 40 (21.0%)	5 (19.2%) 5 (25.0%) 23 (26.0%) 6 (6.1%) 39 (19.5%)	2 (7.7%) 0 (0.0%) 36 (41.9%) 26 (39.4%) 64 (32.0%)	0 (0.0%) 4 (20.0%) 16 (18.6%) 0 (0.0%) 20 (10.0%)
I gained better respect in the family and community	Strongly Disagree Agree Strongly Agree Total	0 (0.0%) 18 (40.0%) 17 (13.1%) 35 (17.5%)	11 (44.0%) 8 (17.8%) 23 (17.7%) 42 (21.0%)	2 (8.0%) 0 (0.0%) 37 (28.5%) 39 (19.5%)	8 (32.0%) 14 (31.1%) 42 (32.3%) 64 (32.0%)	4 (16.0%) 5 (11.1%) 11 (8.5%) 20 (10.0%)
I acquired better communication skills	Disagree Strongly Disagree Agree Strongly Agree Total	0 (0.0%) 2 (10.5%) 17 (16.5%) 16 (23.5%) 35 (17.5%)	4 (50.0%) 9 (47.4%) 12 (11.7%) 17 (25.0%) 42 (21.0%)	0 (0.0%) 0 (0.0%) 37 (35.9%) 2 (2.9%) 39 (19.5%)	4 (50.0%) 8 (42.1%) 23 (22.3%) 29 (42.6%) 64 (32.0%)	0 (0.0%) 0 (0.0%) 14 (13.6%) 4 (5.9%) 18 (10.0%)
Changed the political, social, and economics and cultural perception of the society about women	Disagree Strongly Disagree Agree Strongly Agree Total	0 (0.0%) 4 (12.0%) 18 (31.0%) 13 (13.0%) 35 (17.5%)	4 (44.0%) 0 (0.0%) 15 (25.9%) 23 (23.0%) 42 (21.0%)	5 (55.0%) 9 (27.3%) 7 (12.1%) 18 (18.0%) 39 (19.5%)	0 (0.0%) 13 (39.4%) 14 (24.1%) 37 (37.0%) 64 (32.0%)	0 (0.0%) 7 (21.2%) 4 (6.9%) 9 (9.0%) 20 (10.0%)
Enhanced the means and method of empowering women	Disagree Strongly Disagree Agree Strongly Agree Total	0 (0.0%) 2 (13.3%) 21 (25.3%) 12 (12.4%) 35 (17.5%)	0 (0.0%) 0 (0.0%) 23 (27.7%) 19 (19.6%) 42 (21.0%)	5 (100%) 0 (0.0%) 23 (27.7%) 11 (11.3%) 39 (19.5%)	0 (0.0%) 13 (86.7%) 14 (16.9%) 37 (38.1%) 64 (32.0%)	0 (0.0%) 0 (0.0%) 2 (2.4%) 18 (18.6%) 20 (10.0%)

From the table 2 above, 55 (40.95%) science, 40 (41.5%) arts and social science, 39 (39.7%) engineering, 59 (61.4%) Education and 20 (20.7) law students agree that ODL enhanced the local bodies while 0 (0.0%) science, 2 (28.6%) arts and social science, 0 (0.0%) engineering, 5(71.4%) education and 0 (0.0%) disagree that ODL enhanced the local bodies. Also on whether they gained confidence in dealing with family, 31 (35.4%) science, 37 (37.4%) arts and social science, 39 (62.2%) engineering, 15 (12.1%) Education and 59 (12.1%) law students agree while 4 (28.6%) science, 5 (100%) arts and social science, 0 (0.0%) engineering, 5(35.7%) education and 5 (35.7%) disagree. On whether they have achieved higher educational qualifications that increased social esteem, 35 (39.6%) science, 31 (36.1%) arts and social science, 39 (53.2%) engineering, 59 (65.9%) Education and 15 (16.4%) law students agree, while 0 (0.0%) science, 11 (41.2%) arts and social science, 0 (0.0%) engineering, 5(29.4%) education and 5 (29.4%) disagree. 27 (36.0%) science, 31 (39.5%) arts and social science, 28 (37.5%) engineering, 47 (61.6%) Education and 18 (25.4%) law students agree, while 8 (42.1%) science, 11 (45.1%) arts and social science, 11 (52.2%) engineering, 13(50.0%) education and 2 (10.5%) disagree that ODL serves as second chance for the earlier dropout and the disadvantaged. It was also observed that 35 (39.5%) science, 33 (48.6%) arts and social science, 33 (36.8%) engineering, 64 (69.34%) Education and 16 (15.2%) law students agree that 0 (0.0%) science, 9 (69.2%) arts and social science, 6 (100%) engineering, 0(0.0%) education and 4 (30.8) disagree that ODL enhanced the local bodies. The larger percentage of the women across programmes also agree that ODL enhanced access to legal literacy and information relating to women's right and entitlement in society so as to participate as an equal footing in all areas, changes socialization process, enable them to gain better respect in the family and community, acquire better communication skills, changed the political, social, and economics and cultural perception of the society about women, enhanced the means and method of empowering women while 27 (93.3%) of the women in science department only disagree that ODL enable them to develop ability to think critically while other women in the other programmes agreed.

Testing of Null Hypotheses

Hypothesis One: ODL does not significantly enhance the status of women in different program of study in Lagos State.

Table iii: Pearson Chi-square analysis on the status of women in ODL across different programmes

Test Statistics												
	Has ODL enhanced local bodies	Have you gained confidence in dealing with family	I have achieved higher educational qualifications that increased social esteem	It serves as second chance for the earlier dropout and the disadvantaged	It facilitates the acquisition of variety of knowledge through the print and the non print media	It enhanced access to legal literacy and information relating to women's right	I am able to develop ability to think critically	It changes socialization process	I gained better respect in the family and community	I acquired better communication skills	Changed the political, social and economic and cultural perception of the society about women	Enhanced the means of method of empowering women
Chi-Square	28.226 ^a	93.509 ^a	63.743 ^a	43.669 ^a	73.440 ^a	49.286 ^a	103.766 ^a	87.255 ^a	43.146 ^a	58.572 ^a	39.311 ^a	73.739 ^a
df	8	12	12	12	12	12	12	12	8	12	12	12
Asymp. Sig.	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

- a. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 43.0.

From table above, the result of the Pearson chi-square analysis shows that all the variables tested in the hypothesis are significant {0.000} at 0.05 level of significance. The null hypothesis was rejected and the alternative hypothesis is taken. Hence ODL significantly enhance the status of women in different program of study in Lagos State.

Hypothesis Two: Women does not face any significant challenges on the ODL programme

Table iv: Chi-square analysis on the challenges women face on the ODL programme

Test Statistics									
	Multiple responsibilit y at home and at work	Face to face preference	Feeling of anxiety	I have Technology phobia	I always feel overwhelm ed	Lack of electricity	Harassment from male lecturers	Poverty	There is support from family members
Chi-Square	153.721 ^a	135.023 ^a	139.302 ^a	117.814 ^a	65.628 ^a	59.209 ^a	82.233 ^a	101.907 ^a	75.116 ^a
df	3	3	3	3	3	3	3	3	3
Asymp. Sig.	.000	.000	.000	.000	.000	.000	.000	.000	.000

- a. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 43.0.

The above analysis reveals that the result of the chi-square analysis shows that all the variables tested in the hypothesis are significant {0.000} at 0.05 level of significance. The null hypothesis was rejected and the alternative hypothesis is taken. Hence women face significant challenges on the ODL programme in Lagos State.

1.7 Discussion of Findings

The study assessed the impact of ODL on the status of women in Lagos State. The results of the findings in hypothesis one reveal that the Pearson chi-square analysis reveals that ODL significantly enhance the status of women in different program of study in Lagos State. This is in support of Baikie et al (2005) and Temitayo (2012) agreed that women are studying in different ODL programmes in Lagos State and all over Nigeria at different levels. In support of the above result, one of our respondents {Mrs Fatoye Boluwatife}, said: *I am a working mother, ODL has a indeed helped to reshape my communication skills and I also gained confidence in dealing with my family. My colleague now respects me more than before when I had no higher academic training.*

Another respondent said:

I am a teacher and have two kids; my proprietor has increased my salary ever since he knew that I am on the ODL programme, though I have only one semester to complete my programme. Apart from that I am being called to give my own contribution on some decisions that involves critical thinking. I am happy that even my boss recognizes and appreciates my contributions. I also have more money to take care of my family then before.

In hypothesis two the result shows that women face significant challenges on the ODL programme in Lagos State. This supports Emmanuel, Tijani and Aiyegbusi {2013} which opined that women are perceived by society as managers of home and child minders who are not fortunate to have responsible husbands are left with the sole responsibility of ensuring the total upbringing of their children which gives them extra financial responsibilities. She said further that the socio-cultural and biological roles affect their ability to leave home management and child care responsibilities for school. Working mothers who dare to pursue academic laurels are effaced with the challenging task of combining work, home/child care and studies. Supporting the above result, one of our respondents {Akinbolade Motunrayo}, said: *I teach during the day and I had a three and five year old kid that I need to take care of. Unfortunately for me, I couldn't have time to study my books until ten thirty at night, and by the time I finish the household chores coupled with getting my children in bed and preparing some stuffs for the*

next day, I would have been tired and exhausted. My husband is not supportive and even the family members. I am left alone to do most of the jobs.

Another respondent quipped "Most at times there is no light and most of our assignments are to be submitted on line. By the time I will finish for the day and resort back to my assignments at night, there will be total black out and the cost of buying fuel every time is too much for me".

1.8 Conclusion and Recommendation

In conclusion, both the quantitative and qualitative result of this study shows that women statuses are enhanced by ODL programmes in different programmes. Majority of the women used for this study also agreed that ODL provide accessible education for them. The finding of this study is in support of earlier one Balkie (2005) and Temitayo (2012). This study suggests that ODL is a promising and practical strategy to address the challenge of widening access thus increasing the participation of women in higher education which will in the long run improve their status economically, socially, politically and culturally. Despite these benefits women face different challenges which did not make them to enjoy the programme to the fullest. Hence it is therefore recommended that women who did not have formal educational background should be encouraged to enrol for ODL programmes so that they can compete with their women counterparts whose status has been enhanced through ODL; challenges faced by women on ODL programmes should be straightly addressed so that more women could be encouraged to participate in the programme.

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Assessment of higher education teaching outcomes (Quality of higher education)

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Abstract

Evaluation is a complex process, which is attributed a certain value according to certain criteria and standards. The assessment of higher education teaching outcomes is focused on the student's progress in learning, skills and attitudes. The situation before and after undergoing certain training activities is taken into consideration in relation to the objectives (range of student's knowledge in various subjects, profile of graduate study programme). The evaluation of results of higher education teaching in time is carried out in three steps: initial, ongoing and final. In our article, the evaluation represents an effective tool of student's preparation for their future career in their field of study as well as an effective tool of shaping student's personality (it evokes a need for further education in the field, the need for self-realization and knowledge). The aim of the paper is to highlight the complexity of project teaching evaluation and a causal link between the evaluation of higher education teaching outcomes and the quality of higher education. The article focuses on the importance of multicriteria assessment and presents its sample.

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Peer-review under responsibility of the Sakarya University.

Keywords: Assessment of teaching outcomes, quality of higher education, project teaching, knowledge, skill, attitude

1. Introduction

The evaluation of the teaching results can be assessed from the position of a teacher or a student. It represents a form of feedback for the teacher to correct his next teaching activity in terms of student readiness to continue the process of acquiring knowledge and skills. The evaluation of teaching results for student has an impression of motivation to achieve better performance, deficiencies found represent development opportunities. There opens a space for multi-criteria evaluation in modern methods of education and thus eliminate deficiencies in evaluation of one mark. The quality of university education is affected by the evaluation quality of teaching results. The evaluation of the teaching results finds compares and assesses the level of knowledge and skills obtained in relation to established standards. Standards are prepared on the basis of practical needs in terms of content in the field and personal development of the student by the influence of pedagogical process

2. Definition of learning evaluation

The assessment of results of university education at the present stage of social development experienced the transition from quantitative to qualitative evaluation of results. Quantitative results are mainly the total number of students and number of successful graduates in relation to the number accepted. The qualitative results can include the applicability of students in practice, transfer of know-how from foreign renowned universities, scientific research results with an adequate participation of university students, successful study stays in foreign

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universities. "Scientific research confirmed that using modern methods of process management enable to reach higher performance, (Sujová, 2013, p. 543). Methods of approaches to learning evaluation are several. The Kirkpatrick model is the most famous, (Kirkpatrick, 2006, p. 178).

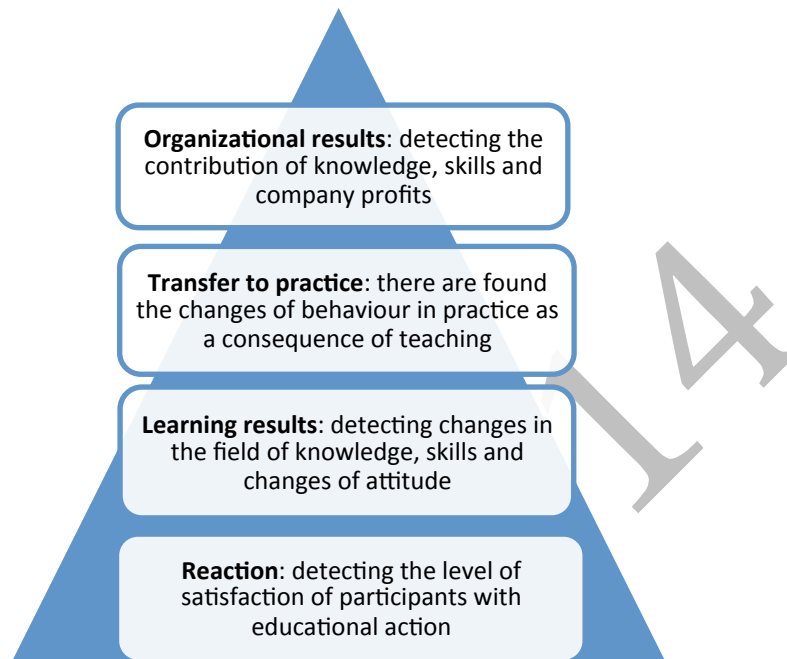
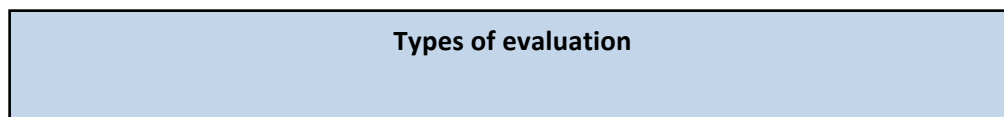


Fig. 1 The levels of learning evaluation according to Kirkpatrick
(Adapted according to source: Kirkpatrick, 2006, Miklovič, 2013)

"Philips continues the work of Kirkpatrick and also recommends to monitor the financial evaluation of the success of the ROI programme (Return of Investment)," (Miklovič, 2013, p. 204).

The evaluation measures the progress of students, i.e. knowledge, skills and changes of attitudes. "The knowledge is considered a set of concepts, facts, definitions, principles, ideas, regularities, patterns, diagrams, relationships, etc. adopted and remembered by learning or experience. Skills are activities of various kind adopted in practice. An attitude is internal orientation to a particular problem or situation, certain belief, which is also reflected in specific actions," (Slávik, 2012, p. 205). "Knowledge is a successfully applied information, and from the enterprise point of view, the relationship of information and knowledge is very important," (Jacková, 2008, p. 49). "The knowledge-oriented world receives more and more attention, which does not limit the development prospects given the immensity of its capabilities." (Litvaj, Poniščiaková, Stančeková, Drbúl, 2013).

The evaluation of the results of teaching is done by several types. The basic of them are shown in Fig. 2.



According to form	According to period	According to number of students
<ul style="list-style-type: none"> •oral, •written, •practical, •electronic. 	<ul style="list-style-type: none"> •entry, •continuous, •final. 	<ul style="list-style-type: none"> • individual, • group, • frontal.

Fig. 2 Types of evaluation

3. Time dimensions of the learning evaluation process

The evaluation process of education affects the time of its implementation during the educational process. There is an entry, formative and summative evaluation. The essence of each one of them is a comparison of student results with defined objectives, which may be patterns and standards. They must have a substantive definition of the content and time limit, and must be measurable. The objectives are based on internal (state of development of students) and external (educational and social) conditions. In order to achieve them it is essential to determine the methods, forms and material means of teaching.

Entry evaluation assesses the state before completing educational activities. They find materials for the creation of content and methodology of education. The importance of entry evaluation is in the ability to divide students into homogeneous groups according to their knowledge level. Didactic test is an important tool to find the results for entry evaluation. It measures objectively the level of knowledge and skills in the field of study (subject) of the group of students assessed. Formative (continuous) is forming and helping to improve the process of acquiring knowledge or skills. Teacher makes a correction of the objectives, content, methods set. Summative (final) is final, summarizing, concluding comparison of results with objectives.

The evaluation of education preceded finding results of teaching (testing). Testing may be oral, written, practical. It is followed by diagnosis, in which the observed results are compared with the standards. The evaluation of education assesses the results, deduces conclusions. The conclusions can be quantitative form (classified the level in Arabic letter, mark, grade, number, etc.) or qualitative form (verbal evaluation of the strengths, deficiencies and recommendations for improving the acquisition of knowledge and acquired skills). Diagnosing has a statement character; evaluation has a character of assessment, evaluation proposition.

The bureaucratic function of evaluation is filled with traditional classification by the teacher, the student may affect only minimally. The problem appears to be the subjective character of the evaluation. The modern evaluation is characterized by a multifunctional character with an emphasis on self-evaluation. The evaluation includes functions of motivation, developing, support, consulting, prognostic. It represents a combination of traditional classification and its own evaluation.

The traditional concept of evaluation of teaching results is based on the organization of the teaching process at universities and the teaching methods mostly used. Modern forms of evaluation can be used in modern methods of obtaining knowledge focused on building skills of a student to do research, find and select the necessary information processed electronically and synthesize them into a coherent set of knowledge. Project teaching belongs among modern methods. It puts the emphasis on building orientation capacity of students in a number of new information and the ability to use them. Project teaching belongs among research methods characterized by

the highest degree of independency in the process of acquiring knowledge.

The process of project teaching is demanding for preparation, course and evaluation of education. The teacher prepares project assignment in the preparation part of the project teaching by defining the problem, specifying the objectives to be achieved, sub-tasks to achieve the objectives, the methods of work used. The project begins with an introductory discussion of solutions among students and teachers on a recent problem. There are continuous consultations and check of teacher during the project, whether the solution is in the right direction. The last part of the project teaching is the evaluation of project teaching. The students present a way of solving the problem, and the conclusions deduced. The place and time of the presentation are known in advance, and therefore, there is not only present the author of project, but also the opponents, others students and persons interested in. "The evaluation of education is an integral part of education. It is the comparison of the objectives (desired behaviour) and results (resulting behaviour) of education. It is the feedback on the effects of educational activities. The evaluation is important, in order to take steps to improve education or to ensure the effective application of knowledge learned and skills obtained," (Kucharčíková, 2009, p. 175).

The evaluation of project teaching is more challenging than the evaluation of results using traditional methods of education. Traditional methods of education are focused mainly on remembering knowledge and subsequent reproduction. They do not require complicated thought operations of creating logical links of understanding, application, analysis, and synthesis and evaluation assessment. The reasons are the long-term basis and complexity of the project solutions and the evaluation removes negative aspect of the evaluation of one mark. It is possible to use the method of 3S – meeting, accuracy, summary, and project evaluation form drawn up from its starting points.

Tab.1 Evaluation form

EVALUATION CRITERION	ASSIGNED POINTS
Meeting the objective	
- control of the degree of fulfillment of the objective defined	
- the choice of the way of work	
- the methods used	
- processing of information resources	
The accuracy of the solution	
- comparison of the results achieved with the standards defined	
- establishing the overview in the field studied	
- innovative solutions	
- substantive and formal defects	
- quality of presentation	
- responses to questions in presentation	
- justification of the results	
- verification of the results of the solutions	
Summary of processing – quality	
- assessment of the complexity of the problem solved	
- connection of the phenomenon analysed to the modified unit (system) on the basis of creativity and invention	
- the use of known or proposed algorithm	
- evaluation of the experiment	
- quality of the proposal of methodology	
- proposal for a model	
- the complexity of the modification of known solutions	

- the contribution of the resultant solution for practice	
SUCCESS OF THE PROJECT	

Evaluation scale: 0 – low level, 1 – standard, 2 – very good level

4. The influence of evaluation of education on the quality of university education

The quality of university education is assessed by the external environment (university graduates, employers of graduates, the Accreditation Commission) and the internal environment (student, lecturer, head of department, assistant dean for education, and vice-rector for education). The evaluation of education results has a direct impact on the evaluation of the quality of university education. "Mutual trust is main cooperation tool and acting in the pro-cooperation climate supported by suitable communication and information systems," (Vodák, Soviar, Lendel, 213, p. 319). "Means of communication are constantly increasing and new forms, and ways of communication are developing because of technological innovations" (Križanová, Masárová, Kolenčík, 2014).

When appropriate evaluation, which means drawing conclusions on the findings of the changes in the knowledge, skills and attitudes; there is forming the student's ability to responsibly prepare for application in practice. "A fair and objective evaluation is such evaluation of the student based on clearly defined criteria and requirements; it accepts the principle of demands in accordance with the university education study of the subject field and takes place on the basis of an individual and fair access to student. Objective evaluation is the motivation for further study," (Slavík, 2013, p. 233). Formative evaluation provides students with information on the level of achievement of the objectives and points out effective learning opportunities to meet the requirements of the student's education. It is necessary to focus on the progress of the student and recommendations, not pointing out its defects. Summative evaluation is to be focused on a comprehensive evaluation according to portfolio of predefined criteria with multiple partial evaluations summarized in the overall evaluation. The evaluation interpreted so forms student to be responsible, creative, inventive, which finally reaches a reasonable quality of university education. "Universities nowadays must behave responsibly and creatively competitively – in their activities they must create such future career opportunities for their future students/graduates, which enable them to hold an excellent starting position on the labour market, and at the same time help them to train their skills and competences, to direct their personal potential so that these students/graduates/employees permanently manage to cope with all work challenges. To achieve this level it means a very precise, demanding, and systematic work of the entire university and all its employees (pedagogic and other ones as well)," (Blašková, Blaško, 2013, 18).

The tools, used when examining the impact of the evaluation of education on the quality of university education, include questionnaires and controlled interview with subsequent analysis of the facts. Questionnaires should be prepared for:

- students – content part and part focused on teaching methods used,
- university teachers – students' readiness to master content side of the subject considering the previous subjects completed, relationship of students to study, conditions of the teaching process, self-assessment of process side of teaching,
- employers - the Interaction between a content of higher education and job experience with focus on the improvement of conditions for graduate student success in the labour market.
- university graduates – interconnection of the content of the teaching to the needs of practice, forming the ability for permanent education, teaching conditions, quality of the work of university teacher.

5. Conclusion

The evaluation of university education should be focused not only to find the progress of students in the course of study, but it has to contribute to the development of abilities and skills necessary (evaluation is part of the

everyday activity of human) for successful access to employment, lifelong education and personal success. The evaluation records the transition from the traditional oral examination with an emphasis on memorizing of knowledge to the functions of evaluation providing information on the performance level of the student and the possibilities how to improve it. New understanding of the evaluation provides the evaluation of the project teaching based on the model 3S, as included in the proposed form.

Acknowledgements

This article was created as part of application of projects: Innovation and internationalization of Education – Instrument to increase the quality of the University of Žilina in the European educational area. Modern Education for the Knowledge Society ITMS 26110230079/Project is funded by EU; Quality education with the support of innovative forms of quality research and international cooperation - a successful graduate needs to practice: ITMS: 26110230090/Project is funded by EU; Grant (granted by Ministry of Education) VEGA No 1/0421/13 Attribute efficiency and the human capital; VEGA 1/0526/13 Modelling of the multilateral relations of economic entities and improving the quality of their decision-making processes with ICT..

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Assessment of the needs and feelings of depression of seniors in residential social services: selected results

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Abstract

The aim of this study is to provide theoretical and methodological insights into the needs and the experience of depression in seniors in residential social services. Two questionnaires were selected. The DPSPZ questionnaire, created by the authors, was used to divide the monitored needs into five broad areas: (1) physical needs, (2) social needs, (3) psychological needs, (4) spiritual needs, (5) respect for autonomy. To determine the incidence of experiencing depression, the GDS-15 was selected. According to the results, gender and the number of family visits had a significant effect on the feelings of importance and saturation of needs among the respondents.

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Peer-review under responsibility of the Sakarya University.

Keywords: needs; depression; assessment; residential social services; seniors

Introduction

The rationale of the work with clients (seniors) in the social services is to create a relationship based on trust. Such an approach assumes tolerance, respect and deep human understanding. All the staff in contact with seniors should realize that the elderly cannot be treated as individuals only needing help from others with nothing to give. Despite the demands of this type of work, the transfer of negative feelings from the personal or professional life of the staff into the workplace is not permitted. Quality of service depends on a change of thinking and attitudes of all those caring for seniors. To avoid situations in which staff do not behave humanely, especially appropriate prevention of burnout, adequate rest and appropriate leisure activities are recommended for the staff.

Typical for old age is the tendency to develop an involutional character. On the basis of the calendar age it is not possible to say whether everyone experiences the same changes at the same time or in the same order (mainly physical changes). The involutional process is not generally the same for everyone, but is very interindividual. Nevertheless, it can be said that age has its unmistakable character. Venglářová (2007) illustrates the components of physical changes, psychological changes and social changes. For example, events such as retirement, loss of family members and peers, or retirement in residential social services are listed among the social changes recorded as "milestones" in an individual's social life.

Relationships with seniors change once they access a residential facility. In particular seniors' relations with family and friends can suffer due to their stay in residential social services. Matoušek, Kolářková and Kodymová (2010) reported that during a long stay of an elderly person in a residential facility the frequency of family visits and friends decreases. Reduced contact with the family is often based on the feeling that the seniors are very well taken care of and there is no need to worry about them. Unfortunately, such an approach by the families can lead to a decrease or complete loss of interest in seniors. For these reasons, the family and relatives of seniors should

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further cooperate with professionals in long-term care social services and keep regular contact with their elderly relations.

An ideal example of old age is the belief that every human being might spend the rest of his/her life in his/her own, natural environment, surrounded by the family in a wider social background. However, the current situation suggests that in the near future nursing homes will remain a core element of health and social care. Therefore, it is necessary for homes for seniors to create a decent place to live in and deal with all the barriers that prevent improvement of the quality of life.

Assessment of the patients' needs is one of the fundamental objectives of residential social services. The main objective of any institutionalized care is to ensure the best possible quality of provided services with respect to the client's medical, psychological, spiritual and social needs. In order to identify current difficulties and patient preferences for the care provided and possible treatment, many research instruments have been developed, particularly abroad.

In many cases, these research instruments were developed in different cultural environments and languages. For example, there are questionnaires assessing the quality of life related to health and tools for evaluating the needs of seniors, such as the Psychosocial Needs Inventory (PNI), the Self-Assessment Questionnaire (SAQ), the Problems and Needs in Palliative Care Questionnaire (PNPC), and others.

In the Czech environment the selection of tools is much smaller; examples are the adapted questionnaire of the European Organization for Research and Treatment of Cancer (EORTC) and the Quality of Life Questionnaire (QLQ-C30) developed to assess the quality of life of cancer patients, or the questionnaire Assessment of the Needs of Patients in Palliative Care (PNAP) (Bužgová & Zeleníková, 2012; Bužgová et al., 2013a; Bužgová et al., 2013b). As a matter of fact, a combination of tools was used to measure the overall quality of life, such as the Subjective Quality of Life Analysis (SQUALA). Given the importance of needs assessment (particularly the psychosocial and spiritual needs) that may be influenced by the social environment and cultural context, a source of inspiration for a creation of research instrument was primarily chosen from the domestic research environment.

Depression is common in the late years of life and can be greatly relieved if recognized early and treated appropriately. However, if left untreated, depression can lead to a decreased appetite for life and the deterioration of the mental and physical state of health. To measure the degree of depression of seniors in the Czech environment the standardized tool called The Geriatric Depression Scale (GDS-15 or GDS-30) for geriatric patients (Sheikh & Yesavage, 1986) can be utilized. The GDS-15 is designed to be used with healthy, medically ill and mild to moderately cognitively impaired older adults and seniors. It has been extensively used in the community, of acute and long-term care settings.

Research methodology

The aim of the research was to describe the current situation of the importance and sufficient saturation of seniors' needs in residential social services by gender, marital status and number of children, and to determine whether there was a link between a sufficient saturation of needs and the occurrence of depression in seniors. The partial research purpose was to determine the incidence of the experience of depression in seniors, their satisfaction with the technical aspects of the residential social services and to find a better way to care for seniors in the residential social services. Due to the nature of the research the quantitative approach using exploratory methods was selected.

Parametric statistical methods for data analysis were used to test hypotheses in case the conditions of normality and homogeneity of data were met. In the latter case non-parametric statistical methods were applied. Null hypotheses were tested at a significance .05. Kolmogorov–Smirnov test, Shapiro-Wilk test and Lilliefors test were used to verify data normality and appropriate conditions for the application of selected statistical methods. The verification of the homogeneity of variances was tested through the Levene and Brown–Forsythe's test.

To find the answers to the research questions measured on a nominal or ordinal level the chi-square test was used. The answers to the questions measured by metric data were obtained through the Analysis of Variance (ANOVA) or t-test. A post-hoc test for finding differences between the variables (Tukey's HSD test) was calculated in the case of a statistically significant difference among multiple independent metric variables. On a

categorical level, Crosstabs and Spearman's rank correlation coefficient was used to verify the relevant connections. Data were analyzed using the statistical program Statistica v. 12 Base and IBM SPSS v. 21 to calculate the validity and reliability of the measurement.

1.1. Measurements

Two questionnaires were selected to answer the research questions. The Geriatric Depression Scale GDS-15 measuring the level of experienced depression in seniors and the questionnaire designed by the authors, the DPSPZ (*Dotazník potrieb seniorů v pobytových zařízeních sociálních služeb*), for detecting the level of importance and sufficient saturation of monitored needs of seniors in residential social services.

The GDS-15⁷⁰ is a self-rating instrument which identifies the symptoms of depression by asking respondents to answer yes or no to questions about how they were feeling over a past week (i.e. "Are you in good spirits most of the time?" or "Do you prefer to stay at home, rather than go out and do new things?"). Of the 15 items, 10 items indicated the presence of depression when answered positively, while the rest indicated depression when answered negatively. Scores of 0-4 are considered normal; 5-8 indicate mild depression; 9-11 indicate moderate depression; and 12-15 indicate severe depression.

For the purposes of this study the DPSPZ questionnaire was created by the authors. The questionnaire is divided into two parts. The first part consists of questions regarding socio-demographic characteristics such as gender, age, marital status, number of children and the number of family visits. The second part consists of questions addressing the current situation of the importance of senior's needs in residential social services. The questionnaire covers a large part of the most measured needs.

Monitored needs are divided into:

- Physical needs (i.e. "Being able to handle pain").
- Social needs (i.e. "Being in the presence of a close person").
- Psychological needs (i.e. "Coping with physical changes").
- Spiritual needs (i.e. "Having a purpose in life").
- Autonomy (i.e. "Ability to make decisions").

The items are scored on a 5-point Likert scale, where 1 means 'the least important for me' and 5 means 'the most important for me'. Respondents were asked to answer the items in relation to their saturation, where 1 means the least satisfied and 5 means the most satisfied. Unfulfilled needs (unsaturated) are defined as the needs that respondents consider important (position on the scale of importance 4 or 5) and at the same time unfulfilled (position on the scale of saturation 1 or 2). The average of all items provides the total score of importance and saturation of needs, where achieving a higher score means achieving higher levels of importance and saturation and vice versa.

The DPSPZ questionnaire contains added items investigating the extent to which the respondent is satisfied with the technical aspects of residency social service facilities, such as the quality of the food, daily routine and cleanliness of the rooms. An open question was added asking respondents to express what they would change (or suggest) in the daily care of the residential social services.

The first version of the DPSPZ questionnaire was tested in a pilot study. The 21 respondents commented on each item and explained how they understood the items. Completion of the questionnaire was anonymous, and the researcher's help was offered only if the respondents couldn't complete the questionnaire independently. Based on the pilot testing, the items were further modified.

Internal consistency was checked using Cronbach's alpha. The reliability of the DPSPZ questionnaire was $\alpha = .83$ representing a good result (see Table 1).

Table 1. Reliability of the DPSPZ questionnaire.

⁷⁰ GDS-15 is a short form consisting of 15 questions developed by Sheikh and Yesavage (1986). Authors created an extended 30-item version labelled The GDS Long Form (GDS-30).

Factor	Physical needs	Social needs	Psychological needs	Spiritual needs	Autonomy	Together
Number of items	3	3	3	3	3	15
Cronbach's alpha	.69	.40	.68	.34	.49	.83

.2. Sample

The basic sample consisted of 27 residential social services in the Zlín region. Researchers contacted professionals in the social services who informed seniors about the voluntary participation in the survey. The target group were seniors aged 65 years and over who had spent at least one year in residential social services by the end of November 2013. The sample included 213 respondents from 10 residential social services in the Zlín region.

The research sample ($n = 213$) was represented by 71 men (33%) and 142 women (67%) with a mean age of 80 years (range 52-100 years, SD of 7.43) (see Fig. 1). The largest number of respondents (124, 58%) consisted of widowers/widows, 48 married (23%), 27 divorced (13%), 13 single (6%), and one respondent lived in an unmarried partnership. The prevailing part of the respondents had children (84%) (see Fig. 2)

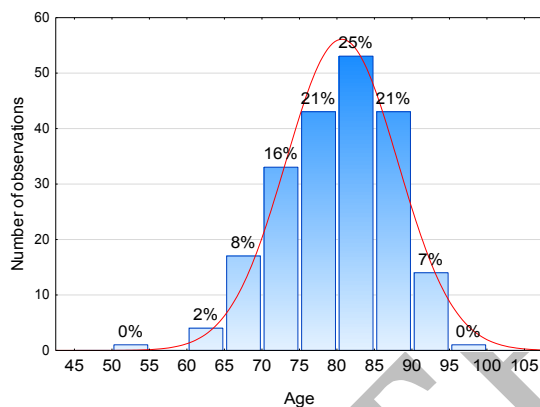


Fig. 1. Distribution of the sample by age.

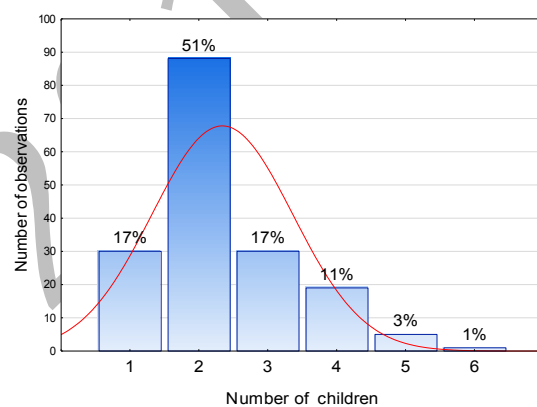


Fig. 2. Distribution of the sample by the number of children.

The largest number of respondents (27%) met their family at least once a week, 23% of respondents met their family even more than once a week. Furthermore, with the diminishing frequency of visits there was a symmetrical decrease in the number of respondents. 16% of respondents visited the family once a month and 14% less than once a month.

Selected results

First we shall present the descriptive data on the current situation of the importance and sufficient saturation of needs, then data on the detected experiences of depression in seniors. Respondents considered physical needs ($\bar{x} = 4.02$) and autonomy ($\bar{x} = 4.00$) to be the most important (see Fig. 3). Generally, the values of the individual groups of monitored needs were at a similar level, reaching values of $\bar{x} = 3.68$ to $\bar{x} = 4.02$ with $SD = .78$.

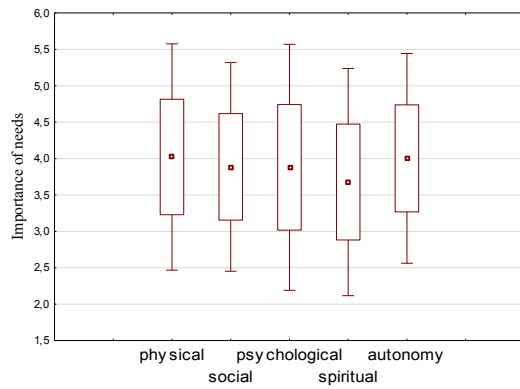


Fig. 3. The average scores of needs importance.

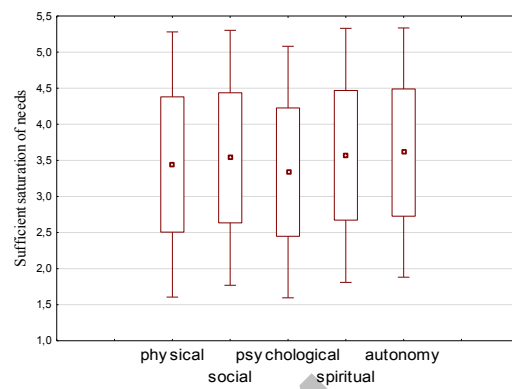


Fig. 4. The average scores of sufficient saturation of needs.

The largest correlation can be found between the importance of physical and psychological needs ($r_s = .56$), statistically significant at the 1% level. We can say that the respondents who perceive physical needs as important will also perceive psychological needs as important and vice versa.

Respondents were least satisfied with the saturation of their psychological ($\bar{x} = 3.34$) and physical needs ($\bar{x} = 3.44$) with an average standard deviation $SD = .90$ (see Fig. 4). In particular, the individual items, related to coping with physical changes and the ability of adequate sleep were perceived as the least saturated needs (see Table 2).

Table 2. Saturation of needs according to individual items.

Kinds of needs	Items	Absolute frequency		Relative frequency (%)	
		-	+	-	+
Physical	Taking care of your body	36	168	18	82
	Handling pain	48	154	24	76
	Sufficient sleep	51	152	25	75
Social	Social activities	31	171	15	85
	Support from health workers	28	168	14	86
	The presence of a close person	46	160	22	78
Psychological	Coping with illness	44	159	22	78
	Physical changes	53	148	26	74
	Dependence on other people	45	159	22	78
Spiritual	Participation in religious services	15	190	7	93
	The meaning of life	33	173	16	84
	Positive view of life	22	183	11	89
Autonomy	Ability to make decisions	39	166	19	81
	Privacy	36	170	17	83
	Continuation of the activities	40	166	19	81

Note. The values in the form of symbols (-/+) represent an absolute or relative frequency of insufficient saturation of the

needs (-) and sufficient saturation of needs (+).

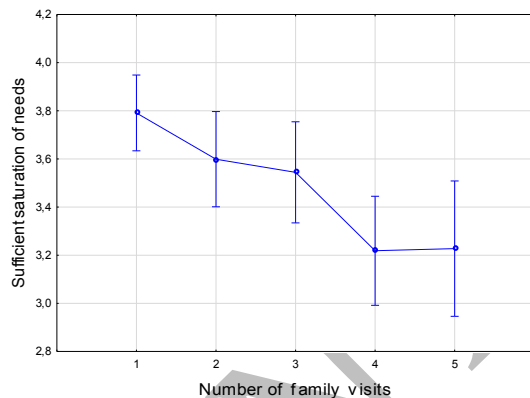
Gender and the number of family visits had a significant effect ($p < .05$) on feelings of importance and on the saturation of needs among the respondents. Women perceived physical and spiritual needs as more important than men, and spiritual needs together with autonomy as more saturated (see Table 3).

Table 3. Differences in importance and saturation of needs by gender.

Monitored needs	Importance of needs					Saturation of needs				
	Men		Women		p	Men		Women		p
	\bar{x}	SD	\bar{x}	SD		\bar{x}	SD	\bar{x}	SD	
Physical	3,86	0,78	4,11	0,79	0,03	3,28	0,92	3,52	0,94	0,08
Social	3,79	0,72	3,93	0,74	0,17	3,38	0,84	3,61	0,93	0,08
Psychological	3,74	0,85	3,96	0,86	0,08	3,19	0,83	3,41	0,92	0,32
Spiritual	3,46	0,80	3,80	0,78	0,00	3,30	0,87	3,71	0,89	0,00
Autonomy	3,96	0,71	4,03	0,75	0,51	3,41	0,84	3,71	0,89	0,02

Note: \bar{x} = represents the average on a scale of 1 to 5, where 1 is the least important / saturated and 5 being the most important / saturated; SD = standard deviation; p = t-test for independent samples.

Family visits influenced the saturation of primarily higher needs (see Fig. 5), i.e. social, psychological and spiritual needs. Statistically significant differences ($p = .00$, $p < .05$) were found between respondents who were visited by the family once a month and respondents who were visited by the family in the most common frequency, i.e. more than once a week. The results highlight the importance of close family in the life of seniors.



Note. The x-axis represents the number of family visits: 1 - more than once per week; 2 – weekly; 3 - once a fortnight; 4 - once a month; 5 - less than once a month

Fig. 5. The saturation of needs according to family visits.

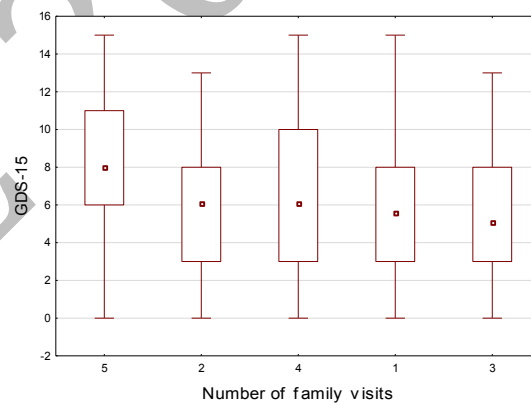


Fig. 6. Depression according to the number of family visits.

Another aim of the research was to determine the incidences depression in seniors. 14% of respondents suffered from severe depression, while mild depression affected 42% of the respondents (see Table 4). According to the results, there weren't any significant differences in the prevalence of depression by gender, age, marital status, death of a partner or childlessness. Only frequency of family visits significantly affected the feelings of depression (see Fig. 6 above). Respondents who were visited by family members in the lowest frequency, i.e. less than once a month, showed the highest degree of feelings of depression and vice versa.

Table 4. Distribution of GDS-15.

GDS-15	Absolute frequency	Cumulative frequency	Relative frequency
A score > 5 points is suggestive of depression	94	94	44
A score ≥ 10 points is almost always indicative of depression	88	182	42

Based on the results of Spearman's rho correlations, a low negative correlation ($r_s = -.38$) between sufficient saturation of needs and feelings of depression was found, statistically significant at the 1% level. We can say that respondents who reach the lower level of sufficient saturation of needs will achieve a higher value of in the area of depression and vice versa. According to the average frequency, they are more likely to be childless men after divorce. In this case, variables accounted for 14% of shared variance. In other words, the level of sufficient saturation of needs helps explain 14% of the variance of experienced depression.

Respondents answered questions investigating how satisfied they were with the technical aspects of the residential social services, in particular with the quality of food, cleanliness and daily routine. The descriptive statistics showed that the respondents achieved high scores in overall satisfaction ($\bar{x} = 4.23$, $SD = .69$). Among the observed technical aspects, respondents were most satisfied with the cleanliness, followed by satisfaction with daily routine and were the least satisfied with the quality of food.

66% of respondents agreed that they were often bored in residential social services a fact which is related to the findings that 64% of respondents had abandoned their original activities and interests, and 70% felt that their life was empty. In order to feel more contented in the residential social services, the respondents suggested including more activities into their daily routine, such as social and cultural events, and sports activities, for example cooking, billiards and longer walks, greater privacy and the possibility of keeping a pet in the room as solutions.

4. Summary and discussion

One of the challenges of old age is finding the right balance in life. Many seniors may suffer from feelings of sadness, loneliness and alienation from the world (Haškovcová, 2010). These feelings can appear much earlier, and one of the critical moments in life usually occurs in middle-aged parents when adult children become independent. In the senior age the loss of a spouse or life partner may increase the feeling of emptiness. This loss often activates the need to provide specialized care for isolated seniors who can't manage the situation alone.

The aim of the research was to describe the current situation of the importance and sufficient saturation of seniors' needs in residential social services by gender, marital status, number of children and to determine whether there is a link between a sufficient saturation of needs and the occurrence of depression in seniors. The partial research objective was to determine the incidences depression in seniors, their satisfaction with the technical aspects of the residential social services and to find a better way to care for seniors in the residential social services. The DPSPZ questionnaire designed by the authors and the standardized GDS-15 short form were used.

The sample consisted of 213 respondents in the age group of 65 and over, who had spent at least one year of residence in the institution of the residential social services by the end of November 2013. Monitored needs were divided into five broad areas: (1) physical needs, (2) social needs (3) psychological needs, (4) spiritual needs, and (5) respect for autonomy, with a good internal consistency ($\alpha = .83$).

Coping with physical changes and the ability to have adequate sleep are perceived by the seniors as the most distressing needs. The data proved that the respondents' gender and the frequency of family visits are strong predictors of sufficient saturation of monitored needs and also predictors of their importance. Women consider physical and spiritual needs more important than men do, and spiritual needs and the needs of autonomy as more saturated. Seniors who were visited by family members in the lowest frequency, i.e. less than once a month, showed the highest incidences and degree of depression.

14% of the respondents suffered from severe depression, while mild depression affected 42% of the respondents. We can say that the respondents who reach a lower sufficient saturation of their needs will achieve higher rates of depression and vice versa. According to the average frequency, childless men after divorce are more likely to be the most depressed. The findings correspond to the results of a survey research (Holmerová et al., 2006) where 122 seniors living in nursing homes suffered from severe depression. According to the authors, depression was not associated with gender or age and was significantly higher in childless seniors without a partner.

Depression is a serious disease affecting of the quality of life and the health status of an individual, and it is also connected to public health, especially in the context of the aging population. A large percentage of respondents agreed that they were often bored. Many of them were forced to leave their original activities and interests and felt that their life was empty. Early prevention by including more activities into their daily routine (social and cultural events, sports activities, such as cooking, billiards and frequent walking) may serve to improve the quality of life, and as a consequence to meet their needs.

The presented results can provide clinically useful information for a multidisciplinary team of professionals involved in care planning and determine a goal-oriented plan of assistance that can be monitored and evaluated. A better understanding of the specific needs associated with gender, age, marital status, death of a partner, childlessness or family visits can help improve the life of seniors.

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Awareness: The effect of group counseling on awareness and acceptance of self and others

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Abstract

In this research, the effect of raising awareness-oriented group counseling programme, predominated by cognitive behavioral methods, on self-awareness, cognitive structures, emotion regulation, and relationships of university students has been investigated. Study design is pre-post test, experiment and control group model. Self-reflection and Insight Scale, Cognitive Emotion Regulation Questionnaire, and Automatic Thoughts Questionnaire were used as instruments. Mann-Whitney U test and Wilcoxon signed ranks test was used in the data analysis. The results showed that the programme was significant on the self-awareness, automatic thoughts, and emotion regulation. It can be concluded that the training programme may have permanent effects.

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Peer-review under responsibility of the Sakarya University.

Keywords: Self-awareness, Automatic Thoughts, Cognitive Emotion Regulation, Group Counseling, University Students.

1. Introduction

Awareness plays an important role in development of positive self-regulation and healthy interpersonal relationships and experiences. The concept of awareness, consists of many cognitive, emotional and social components, is defined as distinguishing subjective experiences, directing the attention to momentary living with an unbiased attitude and accepting them (Siegel, Germer & Olendzki, 2009). Louca (2003) pointed out that cognitive awareness comprises the recognition of individual's own cognitive structure, own perception, understanding and thinking.

Teasdale, Moore & Hayhurst (2002) asserted that awareness is related to insight. Insight is defined as "the capacity to gain an accurate and deep understanding of someone or something (www.oxforddictionaries.com). However, insight should occur not only cognitive level, also on emotional level. According to Beck, emotional insight is to know the individual's own inner world, deeper dysfunctional beliefs and to know them sufficiently in order to change their emotional- behavioral results (Beck, Baruch, & Balter, 2004).

Besides insight, the concept of self-reflection process is also related to awareness. Described as "thinking about the individual's own thoughts and intentions" (von Wrihtg, 1992, cited in Akın & Yıldız, 2012), this notion points out the process of the individual's perceptions. In this process, the individual endeavors to something identified as astonishing, interesting or hard, reconstructs it, and tries to give a meaning by objectifying it for making an inference about next actions. That is the reason why the skills helping to occur self-reflection for awareness can be taught (Grant, Franklin, & Langford, 2002).

Awareness develops the skills of recognizing the feelings of others and the individual's own feelings. Emotional awareness comprehends thinking about emotional experiences and having information of the present emotion as well, however it is different from experiencing and expressing the emotion (Croyle & Waltz, 2002).

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Therefore, one has the ability to monitor one's own and others' feelings, discriminate among them and use this information to guide one's thinking and actions (Salovey & Mayer, 1990).

Developing cognitive and emotional awareness will be affective on one's having ability of emotion regulation which is identified as an instrumental feature within the social life. Emotion regulation is formed by controlling, evaluating, intrinsic and extrinsic processes that are especially responsible for modifying the emotional reactions to accomplish the goals (Thompson, 1994). On the other hand, cognitive awareness consists of such high level skills as planning, self-controlling, checking, and developing cognitive strategies and self-awareness (Louca, 2003). In this context, cognitive emotion regulation is composed of such high level skills as perception and interpretation of social signs as a process, and forming behavioral reactions (Dodge & Garber, 1991; Feldman-Barrett, Gross, Corner-Christensen, & Benvenuto, 2001).

Garnefski, Kraaij and Spinhoven (2001) used "Cognitive Emotion Regulation" and "Cognitive Coping" as interchangeable terms. They indicated that the regulation of emotions through cognitions may be thought as indistinguishable in human life; and cognitions and cognitive processes may help to manage or regulate feelings or emotions. They focused on the cognitive aspect of coping and defined these processes as mental strategies and thoughts used for regulating intentional emotions.

Individual's way of thinking is highly important in the development processes of cognitive and emotional awareness. Cognitive structures – schemas- sometimes shelter dysfunctional, irrational, automatic thoughts and beliefs. Automatic thoughts, dysfunctional beliefs and cognitive distortions are among these structures and they cause reducing awareness (Beck, 2001). However; replacing these negative and unrealistic thoughts with alternative and healthy thoughts will solve the problem and raise awareness (Köroğlu, 2013; Dobson & Dobson, 2009).

In the light of this information, raising awareness-oriented group counseling programme, predominated by cognitive behavioral methods, has been developed in this study based on the hypothesis of comprehending the relationship between feelings, thoughts and behaviors, realizing the automatic and unrealistic thoughts, then replacing them with healthy thoughts, and therefore raising awareness on this issue. It was aimed to examine the effects of the developed programme on the participants' insight, self-reflection, cognitive and emotion regulation processes. In accordance with the main purpose, these hypotheses were tested:

1. There will be significant differences between experimental and control groups and their insight and self reflection, negative automatic thoughts and cognitive emotion regulation scores, in favor of experimental group.
2. There will be significant differences among pre and post-test scores for insight and self-regulation, negative automatic thoughts and cognitive emotion regulation processes of the students in experimental group.

2. Method

2.1. Study Group

The sample group comprised 24 students who have been studying 3rd grade in Marmara University Guidance and Psychological Counseling Department in 2013-2014. In the experimental group 7 female and 5 male and in the control group 8 female and 4 male students, in total 15 female and 9 male students participated voluntarily in the study. The average age of the participants is 21,70 (sd=2.55) as the participants were among 20-28 ages.

2.2. Research Design

Design of research was based on pre-post test, experiment and control groups each of which included 12 subjects. Groups were organized as pre-test, post-test, experimental and control groups. Before starting the training programme, scales were applied as pre-test to both groups, after than ten sessions training were provided to experimental group. The scales were also applied as post-test to both groups.

2.3. Instruments

In the study Self-reflection and Insight Scale, Cognitive Emotion Regulation Questionnaire, and Automatic Thoughts Questionnaire were used to gather data.

2.3.1. Self-reflection and Insight Scale

The scale was developed by Franklin, & Langford (2002) and adapted to Turkish by Akın & Yıldız (2012). It has 20 items and two subscales as called self-reflection and insight. Cronbach Alpha values of the original scale were calculated as .91 and .87; test-re-test values were .77 and .78, respectively. In the reliability and validity analysis of Turkish version, the internal consistency coefficients of the scale were .87 for self-reflection subscale, .78 for insight subscale, and .87 for overall scale. The corrected item-total correlations ranged from .30 to .60.

2.3.2. Cognitive Emotion Regulation Questionnaire

Cognitive Emotion Regulation Questionnaire was developed by Garnefski, Kraaij ve Spinhoven (2001) and adapted to Turkish by Onat & Otrar (2010). It has 36 items and nine subscales. These are following: Self-blame, acceptance, rumination, positive refocusing, refocus on planning, positive reappraisal, putting into perspective, catastrophizing, other-blame. The questionnaire was positively related to Negative Mood Regulation ($r = -.572$). Cronbach alpha coefficient of the scale was found " $\alpha = .78$ "; test-retest correlation coefficient was " $r = 1.00$ ". Item-total correlation co-efficiencies vary between ".18" and ".46" item-reminder correlation co-efficiencies vary between ".10" and ".39"

2.3.3. Automatic Thoughts Questionnaire

Hollan and Kendall (1980) developed a scale which consists of 30 items with a 5- Likert-type. Original scale was applied to patients with depressive, non-depressive psychopathology, and other non-treated patients. The Cronbach Alfa value was found as .94, .89, and .91, respectively (cited in Savaşır & Şahin, 1997). The Turkish adaptation of the scale has been done by Aydın & Aydın (1990) and Şahin & Şahin (1992). Cronbach's alpha internal consistency was found as .114 in depressives and .95 with a normal group of patients (Aydın & Aydın, 1990) and in the other study with the student sample, it has been calculated as .93 (Şahin & Şahin, 1992). Test-retest reliability of the Turkish version of the scale is .77, and it has been reported that it was correlated with the subscales of the MMPI-D and BDI (cited in Savaşır ve Şahin, 1997).

2.4. Process

In the preparation process of raising awareness-oriented group counseling programme that has cognitive and behavioral elements many sources were used (Türkçapar, 2012; Çatak & Ögel, 2010; McKay, Davis, & Fanning, 2009). The group work carried out as 10 sessions; the duration was 90 minutes and the frequency was a day in a week. During the sessions, the participants were asked to present information structured with skills, perform role-playing based on the scenario and experiences about the skills and do assignments about skills. After planning the sessions, the purpose of the study was announced. Both for determining the needs and aims of the participants, and informing them about the group process, pre-interviews were done. The group members were selected considering that not having been in such kind of study before.

The program was included ten sessions. In the *first* session, meeting and forming the group were aimed. The scales were applied as pre-test in this session. In the *second* session, the purpose was recognizing oneself and introducing the others in the context of creating awareness. In the *third* session, creating awareness about the body was aimed and by the imagination exercise, the reflections of emotions onto body were discussed. In this context, the technique of breathing was taught. The aim of the *fourth* session was gaining awareness about controllable behaviors and choices. The factors influencing evaluation of behaviors were discussed in this session. The *fifth* session was held aiming at recognizing life goals, subjective thinking styles that allows to feel oneself inadequate, thinking mistakes and to be aware of those mistakes by the participants. The main concepts of Cognitive Behavioral Therapy also mentioned in this session. In the *sixth* session, the concepts of core beliefs, schemas and automatic thoughts and their relationships among them were aimed to be realized. The participants were asked to record/write the automatic thoughts for a week as homework. In the *seventh* session, it was aimed to evaluate the automatic thoughts and analysis, and to determine the relationship of these thoughts with cognitive distortions. The activities were done such as automatic thought exploration, Socratic questioning, proof investigation and alternative thought development. The importance of developing alternative thoughts towards intrapersonal and interpersonal relationships was discussed in the *eighth* session. In this context, communicational skill exercises were done such as empathy, active listening, showing the appropriate reaction, the usage of "you-language" and "I-language" and the effects of these exercises were discussed among the group. In the *ninth*

session, it was aimed to improve the skills of recognizing emotions/feelings and expression of emotions. In the *tenth* session, the general assessment of the group was done. The evaluation form and scales were also given as post-tests.

3. Results

Before the programme, the scale's scores of experimental and control group were examined by using Mann Whitney-U test. The results are given in Table 1 ve 2.

Table 1. Mann-Whitney U test results for experimental and control groups' pre-test scores in terms of Self-reflection and Insight Scale and Automatic Thoughts Questionnaire

Scales	Group	N	Mean Rank	Sum of	U	P
Self-reflection	Experimental	12	12,92	155,00	67,000	,799
	Control	12	12,08	145,00		
Insight	Experimental	12	14,04	168,50	53,500	,291
	Control	12	10,96	131,50		
Automatic Thoughts	Experimental	12	11,05	121,50	55,500	,361
	Control	12	13,73	178,50		

As presented in Table 1, there is not any difference between experimental and control group pre-test scores of Self-reflection and Insight Scale and Automatic Thoughts Questionnaire.

Table 2. Mann-Whitney U test results for experimental and control groups' pre-test scores in terms Cognitive Emotion Regulation Questionnaire

Scale –	Group	N	Mean Rank	Sum of	U	P
Self-blame	Experimental	12	12,08	145,00	67,000	,767
	Control	12	12,92	155,00		
Acceptance	Experimental	12	13,50	162,00	60,000	,483
	Control	12	11,50	138,00		
Rumination	Experimental	12	10,92	131,00	53,000	,269
	Control	12	14,08	169,00		
Positive refocusing	Experimental	12	10,88	130,50	52,500	,250
	Control	12	14,13	169,50		
Refocus on planning	Experimental	12	11,33	136,00	58,000	,416
	Control	12	13,67	164,00		
Positive reappraisal	Experimental	12	11,46	137,50	59,500	,469
	Control	12	13,54	162,50		
Putting into perspective	Experimental	12	11,04	132,50	54,500	,307
	Control	12	13,96	167,50		
Catastrophizing	Experimental	12	12,29	147,50	69,500	,307
	Control	12	12,71	152,50		
Other-blame	Experimental	12	13,67	164,00	58,000	,884
	Control	12	11,33	136,00		

It was found that there is not any differences between experimental and control group pre-test scores of all subscales of Cognitive Emotion Regulation Questionnaire

After the programme, to examine the difference between experimental and control group Mann-Whitney U test applied. The results are presented in Table 3 and 4.

Table 3. Mann-Whitney U test results for experimental and control groups' post-test scores in terms of Self-reflection and Insight Scale and Automatic Thoughts Questionnaire

Scales	Group	N	Mean Rank	Sum of	U	P
Self-reflection	Experimental	12	15,75	189,00	33,000	,023*

Insight	Control	12	9,25	111,00	34,000	,028*
	Experimental	12	15,67	188,00		
Automatic Thoughts	Control	12	9,33	112,00	-33,000	,024*
	Experimental	12	9,25	111,00		
	Control	12	15,75	189,00		

***p<.05**

According to the results, there are meaningful differences between experimental and control group's self-reflection, insight and automatic thoughts scores. The differences occurred in favor of experimental group.

Table 4. Mann-Whitney U test results for experimental and control groups' post-test scores in terms Cognitive Emotion Regulation Questionnaire

Scale –	Group	N	Mean Rank	Sum of	U	P
Self-blame	Experimental	12	6,67	80,00	2,000	,000***
	Control	12	18,33	220,00		
Acceptance	Experimental	12	15,46	185,50	36,500	,039*
	Control	12	9,54	114,50		
Rumination	Experimental	12	17,25	207,00	15,000	,001**
	Control	12	7,75	93,00		
Positive refocusing	Experimental	12	16,75	201,00	21,000	,003**
	Control	12	8,25	99,00		
Refocus on planning	Experimental	12	16,96	203,50	18,500	,002**
	Control	12	8,04	96,50		
Positive reappraisal	Experimental	12	15,79	189,50	32,500	,022*
	Control	12	9,21	110,50		
Putting into perspective	Experimental	12	14,17	170,00	52,000	,233
	Control	12	10,83	130,00		
Catastrophizing	Experimental	12	7,96	95,50	17,500	,002**
	Control	12	17,04	204,50		
Other-blame	Experimental	12	8,58	103,00	25,000	,006**
	Control	12	16,42	197,00		

*p<.05, **p<.01, ***p<.001

Mann Whitney-U test indicated that there are differences between experimental and control group scores received cognitive emotion regulation scale. The differences occurred in all subscales, except for "putting into perspective" scale, and in favor of experimental group.

In order to examine the differences between the pre-test and post-test of experimental group, Wilcoxon Signed Rank test was conducted and results have been given in Table 5 and 6.

Table 5. The result of Wilcoxon Signed Rank test in terms of Self-reflection and Insight Scale and Automatic Thoughts Questionnaire

Scales	Group	N	Mean Rank	Sum of	Z	P
Self-reflection	Negative Value	2	4,50	9,00	2,15	,031*
	Positive Value	9	6,33	57,00		
	Equal	1				
Insight	Negative Value	3	7,17	64,50	2,011	,044*
	Positive Value	9	4,50	13,50		
	Equal	0				
Automatic	Negative Value	10	4,25	8,50	-2,39	,017*

Thoughts	Positive Value	2	6,95	69,50
	Equal	0		

*p<.05

As can be seen in Table 4, according to the Wilcoxon test, statistically significant differences have emerged between pre-test and post-test scores of self-reflection, insight and automatic thoughts.

Table 6. The result of Wilcoxon Signed Rank test in terms of Cognitive Emotion Regulation Questionnaire

	Group	N	Mean Rank	Sum of	Z	P
Self-blame	Negative Value	12	,00	,00	-3,11	.002**
	Positive Value	0	6,50	78,00		
	Equal	0				
Acceptance	Negative Value	9	5,90	59,00	2,38	.017*
	Positive Value	10	7,00	7,00		
	Equal	1				
Rumination	Negative Value	0	,00	,00	-3,00	.003**
	Positive Value	11	6,00	66,00		
	Equal	1				
Positive refocusing	Negative Value	5	5,30	26,50	-,10	.917
	Positive Value	5	5,70	28,50		
	Equal	2				
Refocus on planning	Negative Value	0	,00	,00	-2,96	.003**
	Positive Value	11	6,00	66,00		
	Equal	1				
Positive reappraisal	Negative Value	0	,00	,00	32,50	.022*
	Positive Value	9	5,00	45,00		
	Equal	3				
Putting into perspective	Negative Value	2	2,00	4,00	-1,38	.168
	Positive Value	4	4,25	17,00		
	Equal	6				
Catastrophizing	Negative Value	4	4,75	19,00	1,25	.210
	Positive Value	7	6,71	47,00		
	Equal	1				
Other-blame	Negative Value	9	5,33	48,00	-2,12	.034*
	Positive Value	1	7,00	7,00		
	Equal	2				

According to Wilcoxon test, statistically significant differences were found between pre-test and post-test scores of Cognitive Emotion Regulation Questionnaire. Except for Putting into perspective and Catastrophizing subscales, all subscales have different scores between pre and post- test scores.

4. Discussion

This research was designed for testing the efficacy of the group counseling programme prepared as raising one's own and towards others' awareness. The programme, based on cognitive-behavioral approach and held by 10 sessions, was prepared according to the experimental and control groups with pre-test and post-test model. 15 female and 9 male students, totally 24 students attended in the programme (12 for experimental and 12 for control group). Before and after the programme, scales as pre-test and post-test were applied to the both groups. In the pre-test applications, it was analyzed that there is no differences among experimental and control group students regarding the measured qualifications.

In parallel with the purpose of the research, while testing the efficacy of group counseling, the hypothesis developed, as there will be differences between the students who attended the programme and those who did not. According to the conducted data, there were significant differences between the control group and experimental group after the application of the programme. These significant differences occurred in favor of the experimental

group on the levels of insight-self-reflection skills and negative automatic thoughts. When examining cognitive emotion regulation skills, the significant differences were determined in favor of the experimental group considering the skills such as self-blame, acceptance, focus on the thought, positive reappraisal, refocus on planning and positive refocusing.

Developing awareness-oriented group counseling programme was prepared to improve the skills of recognizing and accepting the participants' oneself and others. Besides raising awareness in respect of one's own perception and body, the activities were done as about determining the factors that affect on the decisions and choices, exploring cognitive structure and distortions, and replacing them with healthy thoughts. The exercises were done in order to develop effective communication skills, recognizing others' feelings and thoughts and cognitive emotion regulation skills. Findings have shown that these exercises and applications had a positive effect on the students who attended the experimental group.

Another hypothesis of the research is that there will be differences on the students' -before and after attending the group counseling programme- regarding the skills of insight and self-reflection, negative automatic thoughts and cognitive emotional regulation. The conducted data presented that students' insight and self-regulation skills increased, although negative automatic thoughts decreased. Within the scope of cognitive emotion regulation skills, the participants' acceptance, focus on thought, refocus on planning and positive reappraisal increased, whereas self-blame and blaming others decreased.

The activities about recognizing oneself and others, carried out during the programme, comprised cognitive, emotional and physical elements. It was seen that intra-group exercises, homework and feedback given by the group members to each other raised awareness and insight of the participants. Conducted studies have shown that when insight is low, it was pointed out that obvious strains on mental skills and related to that situation, lack of social inadequacies was experienced (Brüne 2005; Grant, Franklin, & Langford, 2002). It was believed that awareness developed within the group study would positively affect the individuals' sense of self and social relationships.

On the other hand, it was also observed that the participants' negative automatic thoughts decreased. Türkçapar (2012) stated that automatic thoughts are cognitions aroused spontaneously mostly under emotionally stressful moments in the stream of consciousness. Dysfunctional premises and core beliefs that create rules are the source of these thoughts (Köroğlu, 2013; Dobson & Dobson, 2009; Beck, 2001). Unrealistic, illogical and non-adaptive beliefs and schemas may lead to emergence of cognitive distortions (Beck, 2001). It is believed that replacing these dysfunctional beliefs with alternative healthy thoughts would solve the problem. Therefore, cognitions and feelings will be regulated altogether (Dobson & Dobson, 2009; Beck, 1995).

In this study, cognitive applications for recognizing the relationship between feeling and thought, determining negative automatic thoughts, making analysis, exploring core beliefs and cognitive distortions are included in line with ABC theory. Instead of unrealistic and non-adaptive thoughts, how to develop healthy thoughts was taught by intra-group applications and homework. The decreasing of negative automatic thoughts among the students who attended the programme proved us that these skills were acquired by them.

Another finding supported the expectation that the participants would be able to modify the skills of cognitive emotional regulation. Realizing the relationship among emotion-thought-behavior, acquiring the skills of questioning the beliefs underlying the feelings facilitated to regulate the feelings cognitively for the participants. Data has shown that there is a great deal of improvement considering acceptance, focusing on thought, refocus on planning (thinking about the steps for coping with any kind of event) and positive reappraisal (giving meaning to the event in terms of personal development) strategies of the participants. Decreasing in the tendency of self-blame and blaming others can be interpreted as programme has contributed to the development of cognitive emotion regulation.

In conclusion, it can be asserted that raising awareness oriented group counseling programme has an impact on the participants' insight- self-reflection, negative automatic thoughts and cognitive emotion regulation skills for modifying emotion-thought and behavior level.

Cognitive and emotional awareness will positively affect the individual's relationship with both oneself and others, since it helps to acquire the skills of prediction about the feelings. With the help of these skills, the individual recognizes not only what he/she feels and what is felt, but also he/she makes the necessary regulations

by evaluating the options and situation, as well. Considering that these skills are acquired, it is seen that there is a need for more applications to raise cognitive and emotional awareness. In this case, such kind of applications should be reproduced not only with university students, but also with different sampling and the results should be compared, and it will be a reference for the following studies. Besides, conducting qualitative and longitudinal researches for determining the variances about awareness enables the further researches to investigate the subject thoroughly.

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Belief bias effect in reasoning of future teachers

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Abstract

Belief bias is the tendency to be influenced by the believability of the conclusion when attempting to solve syllogistic reasoning problem. This type of problems is considered as reflection of major critical thinking skill – i.e. putting aside one's prior knowledge and reason from new premises. The paper presents results of a study with 597 future teachers, in which we examined their ability to resist belief bias and whether it can be connected to their cognitive abilities (intelligence measured by Vienna Matrix Test) or cognitive dispositions (Master Rationality Motive Scale). Results showed that participants showed highest belief bias with problems that were either valid, but unbelievable, or invalid but believable with cognitive abilities only weakly correlated with resisting to belief bias (only in case of valid but unbelievable problems). Results are discussed in terms of their implication for rationality debate and newly proposed Stanovich's tripartite model of human mind.

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Peer-review under responsibility of the Sakarya University.

Keywords: belief bias; cognitive ability; formal reasoning task; syllogisms; thinking dispositions; rationality.

Rationality and cognitive ability

The association between higher cognitive abilities and rationality is not straightforward. The vast amount of research in heuristic and biases program revealed that despite our intelligence, we often fall prey to many cognitive errors and fallacies. It is due to relying on our intuitive, heuristic type 1 processes, instead of employing more deliberate and accurate type 2 processes. Stanovich (2011) further divides type 2 processes into two parts – algorithmic mind is connected with our cognitive abilities to solve the problems and reflective mind is connected with our disposition to recognize the need for more effortful cognitive processes and our dispositions to engage in them. People are sometimes called “cognitive misers” due to their tendency to employ the least effortful ways to solve a given problem. Stanovich (2011) also introduced framework for classification of such cognitive errors. Suboptimal reasoning (and thus implications for rational behaviour of people) can be caused either by three general types of errors: (1) dysfunctional autonomous system, (2) tendency to miserly processing, or (3) so called mindware problems.

Stanovich (2011) also asserts that rationality can be divided into fluid and crystallized in analogy with Cattell/Horn/Carroll Gfc theory, but acknowledges that in contrast with intelligence, rationality is probably more multifarious. Furthermore, rationality is also related to cognitive abilities (which are necessary but not sufficient for rational thinking) and our thinking dispositions or preferences for more effortful thinking, but both these constructs are measured in different ways. As was mentioned previously, to know one's intelligence does not predict that s/he will act rationally (for review of relationship between rationality and intelligence see (Stanovich, 2009, 2011a, 2011b) and the same applies to self-reported thinking styles (for review of predictive validity of self-reported inventories related to rationality/intuition see Hanák, 2013). Kordačová (1994) studied relationship between irrationality, logical thinking (using syllogisms) and cognitive abilities, but she reports only findings regarding relationships to irrational beliefs. She found that correctness or erroneousness of logical reasoning did not change in dependence on the degree of irrationality. In our previous work (Čavojová & Hanák, 2014a) we found only weak correlations between measures of fluid rationality and cognitive styles.

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Multifariousness of rationality has important implications to education. If irrationality is caused by lack of knowledge or motivation, it should be addressed more easily than when it is caused by lack of cognitive abilities. Therefore, the aim of this paper is to explore the possibilities to measure one aspect of rational thinking (namely resistance to belief bias) and its connection to cognitive abilities (intelligence) and motivation for rational integration. In the next sections I will briefly introduce belief bias effect and its relation to rational thinking.

1.1. Critical thinking and belief bias

Critical thinking is one of the important aspects of rationality and teaching critical thinking is one of the main proclaimed objectives of almost all educational systems. The issue of critical thinking in teaching psychology in Slovakia was elaborated by Masaryk, Bašňáková and Kostovičová (2013), who pointed out that our curriculum concentrates more on remembering facts than critical appraisal of learned concepts and theories. Critical thinking is often connected with the ability to decouple prior beliefs and opinions from the evaluation of evidence and arguments (Macpherson & Stanovich, 2007) and is closely related to logic, because it requires objective analysis and evaluation of an issue in order to form a judgment, which should adequately reflect the objective reality.

Often the truth of many judgments cannot be determined without rigorous experimentations, but we can infer the correctness of a judgment by comparing the logical structure of the judgment with the structure of rules for correct reasoning (Gahér, 2003). Everyone who reasons correctly applies the logic rules, whether intuitively or consciously. However, there is a lot of evidence that we often fail to adhere to strictly logical rules and fall prey to many cognitive biases, mainly because we fail to decontextualize. Prescriptive logic states that we should apply the same rules regardless the context, but it is often not the case (for review of research done in Slovakia with regard to intuitive/heuristic processing see Ballová Mikušková, 2014).

Belief bias is one of the examples of such cognitive errors. It means that we tend to evaluate the logical validity of deductive arguments mainly on the basis of our personal beliefs regarding the empirical status of the conclusion (Markovits & Nantel, 1989).

Belief bias is studied most often by syllogistic reasoning paradigm where validity and the believability of the conclusion are put in conflict (Macpherson & Stanovich, 2007; Markovits & Nantel, 1989; Morley, Evans, & Handley, 2004). Belief bias is then defined as greater acceptance of believable than unbelievable conclusions and logical competence can be defined as greater acceptance of valid conclusions than invalid conclusions.

Belief bias research uses two main paradigms: production tasks (participants are asked to draw conclusions from the presented premises) and evaluation tasks (participants are presented with some premises and a conclusion to be evaluated – as valid if it necessarily follows from the premises and as invalid if it does not). The most evidence has been associated with the evaluation tasks (see Morley et al., 2004), but some researchers argued that the requirement to evaluate a conclusion does not necessarily call for deductive thought (Johnson-Laird & Steedman, 1978). Markovits and Nantel (1989) compared evaluation and production paradigm and found significant belief-bias effect in both, although the qualitative analysis indicated that belief-bias effect was more pervasive in production condition.

There are also several kinds of syllogisms that can be used in research. A syllogism usually consists of three statements – the first two statements (premises) each specify the relationship between an end term and the middle term. There are also four possible logical *quantifiers* (some, all, no, and some ... not) which determine the *mood* of the statement (A, I, E, O)⁷³. The order in which the end term and the middle terms are presented can be manipulated to produce one of the four *figures* of the premises. Traditional label for these four figures is MP-SM, PM-SM, MP-MS, and PM-MS, where S is subject, P is predicate and M is a middle term connecting two premises, which does not appear in the conclusion. The order, in which the premises are presented, can also affect the logical performance of participants, which was reported as *figural bias* by Johnson-Laird and Steedman (1978) and Johnson-Laird and Bara (1984). They demonstrated a clear preference for the direction of the conclusion which interacted with the figure of the syllogism.

⁷³(A) universal affirmative (All A are B); (I) particular affirmative (Some A are B); (E) universal negative (No A are B); (O) particular negative (Some A are not B).

In the present study we used the same materials (evaluation task with multiple-model syllogistic problems) as Morley et al. (2004): 1st figure was of two kinds (SiM, MeP, SoP for valid conclusion, SeM, MoP, SoP for invalid conclusion) and 4th figure (PeM, MiS, SoP for valid conclusions, PiM, MiS, SoP for invalid conclusion). Conclusions of the 1st figure type syllogisms were in preferred direction, conclusion of the 4th figure type was in non-preferred direction (Johnson-Laird & Steedman, 1978). Johnson-Laird and Steedman (1978) recommend the each syllogism separately (due to effects of figural bias and preferred direction of conclusion), so the secondary aim of this paper is to examine which kind of syllogism is the most suitable for assessing the belief bias (and resistance to belief bias).

According to Morley et al. (2004) the influence of belief bias interacts with logical status of a problem and is more strongly associated with reasoning on invalid problems. In their study there was only small difference in the acceptance rates of believable (89%) and unbelievable conclusions (59%), but there was a larger difference in acceptance rates for believable (71%) and unbelievable (10%) conclusions for invalid problems.

Methods

1. Participants and procedure

A total of 597 participants ($M_{\text{age}} = 19.9$ years, $SD = 2.45$; 102 men, 470 women, 25 not indicating their gender) took part in the study. The participants were recruited at a pedagogical faculty of large university in Slovakia, so the sample was heterogeneous in their majors, and they were a part of a participant pool who received credit for two different courses for their participation.

Participants completed three different batteries of tasks for the larger study. The intelligence testing ($N = 501$) took place on one session and was collected by author of the paper and her colleagues, formal reasoning tasks (syllogisms) together with thinking dispositions questionnaires and other measures were collected via internet using survio.com online survey software ($N = 406$).

2. Measures

Participants completed a syllogistic reasoning task (to measure belief bias), cognitive abilities measure and thinking disposition measure.

2.2.1 Cognitive ability: Vienna matrix test (VMT)

VMT is based on the classical Raven's test of progressive matrices – two items are from Standard Progressive Matrices and 1 from Advanced Progressive Matrices constructed by Raven. It consists of 24 items in increasing difficulty and is time-limited (25 minutes). Every task contains picture matrix 3x3 with the missing picture in the third row. The task of the participant is to fill in correctly one of the eight possibilities. The essence of the test is to find out the pattern and the test contains several different patterns of rules (distribution of symbols in the task, adding up the symbols, increasing or decreasing the number of symbols or combination of more principles). The VMT shows high correlations with Intelligence Structure Test and the authors conclude that it reflects reliably general cognitive factor. The test is supposed to be culture-fair as it is based on figural content. We used Czech adaptation by Klose, Černochová, Král published by Testcentrum in 2002. The means score for our sample ($N = 501$) was 16.45 ($SD = 3.9$)⁷⁴.

2.2.1 Belief bias in syllogistic reasoning

We used eight syllogistic reasoning problems from the Experiment 1 reported by Morley, Evans and Handley (2004). Half of the problems were worded such that the validity judgment was congruent with the believability of the conclusion (these were termed consistent syllogisms), in the other half of problems the validity of judgment was in conflict with believability of conclusion (these were termed inconsistent syllogisms). This resulted in four

⁷⁴Raw score transformed to IQ scores gave these descriptive results: $M_{IQ} = 106.8$ ($SD = 15.5$).

types of syllogisms: consistent syllogisms could be either valid-believable (e.g. Some healthy people are unhappy. No unhappy people are astronauts. (Therefore) Some healthy people are not astronauts.), or invalid-unbelievable (e.g. No millionaires are hard-workers. Some hard-workers are rich people. (Therefore) Some millionaires are not rich people.). Inconsistent syllogisms could be either valid-unbelievable (e.g. No religious people are healthy. Some healthy people are priests. (Therefore) Some priests are not religious.), or invalid-believable (e.g. No highly trained dogs are vicious. Some vicious dogs are police dogs. (Therefore) Some highly trained dogs are not police dogs.).

To be able to use inferential statistics, we transformed raw data into scores – for each correctly solved syllogism (accepting valid solutions and rejecting invalid solutions regardless their believability and conclusion direction) participant gained 1 point. We also summed scores for combined types of syllogisms – i.e. valid-believable, valid-unbelievable, invalid-believable and invalid-unbelievable; valid-believable and invalid-unbelievable were then added to form consistent syllogism score, valid-unbelievable and invalid-believable were added to form inconsistent syllogism score. Thus, we used all 15 variables (8 individual syllogism scores, 4 subtotals according to validity and believability, 3 totals – consistent, inconsistent and overall).

This type of problems is considered as the reflection of major critical thinking skill – i.e. putting aside one's prior knowledge and reason from new premises (Toplak et al., 2013). According to Macpherson and Stanovich (2007) belief bias can be expressed as difference between the number of consistent problems answered correctly and the number of inconsistent problems answered correctly. They assert, however, that with adult participants the difference score is less reliable than the raw number of inconsistent problems answered correctly due to a ceiling effect, therefore we analyzed both variables (score for inconsistent problems answered correctly and the difference between the two scores).

2.2.1 Motive for rational integration: Master rationality Motive Scale

Master Rationality Motive Scale (MRMS, Stanovich, 2011) measures the construct of rational motivation (felt need for rational integration). It combines questions from few other scales, mostly measuring cognitive styles or personality. MRMS consists of 15 questions. Five questions are new (items 8 - 13), but all others used from different scales and inventories. We used 6 point Likert scale (1 – completely disagree to 6 – completely agree). Scores could range from 15 (little motive for rational integration) to 90 (high motive for rational integration). Internal consistency of MRMS was examined by Hanák, Čavojová, and Ballová Mikušková (2014) and was quite low (Cronbach's alpha = 0.638); the means score in our sample was 57.33 (SD=8.25).

Results

First, we analyzed whether there are significant differences between the directions of conclusion within the valid problems. There was no significant difference between Valid-Believable preferred (and Valid-Believable non-preferred problems ($\chi^2=2.488$, $p=.072$) in accepting problem as valid. However, there was difference in accepting unbelievable solutions as valid depending on the conclusion direction ($\chi^2=23.507$, $p<.001$). Significantly more participants rejected conclusion as valid when it was unbelievable. In case of invalid problems, there was no difference in accepting invalid conclusions ($\chi^2=1.854$, $p=.103$) between preferred and non-preferred direction, but again, there was difference in accepting invalid conclusion ($\chi^2=3.469$, $p=.041$) between preferred and non-preferred direction. The main effect of conclusion direction seem to be for unbelievable conclusions, where preferred direction leads to higher logical competence (accepting valid and rejecting invalid conclusions when the solution is unbelievable).

Table 1 Descriptive statistics for all problems according to conclusion direction, validity and belief

		believable		unbelievable	
		preferred	non-preferred	preferred	non-preferred
valid	% of accepted answers	65,9	73,9	67,4	38,5
	mean score (SD)	0,66	0,73	0,67	0,39

invalid	% of accepted answers	65,7	55	17,4	44,3
	mean score (SD)	0,33	0,45	0,83	0,55

We also examined difference between believable and unbelievable conclusions after combining preferred and non-preferred direction of conclusion. In general, more people accepted believable (50.2%) rather than unbelievable (31.1%) conclusion, when preferred and non-preferred conclusions were combined. Also more people accepted invalid conclusion when it was believable (37.6%) than when it was unbelievable (9.3%), when preferred and non-preferred conclusions were combined. Logical competence of participants was manifested by the fact, that in general, they accepted more valid than invalid conclusions (50.20% vs. 37.6% in case of believable conclusions and 31.1% vs. 9.3% in case of unbelievable conclusions).

Significant belief bias was displayed; the mean number of consistent syllogism answered correctly (2.77, SD=0.94) was significantly higher than the mean number of inconsistent syllogisms answered correctly (1.84, SD=1.07), $t(433)=13.551$, $p<0.001$. Participants did not show consistent logical competence – while they solved correctly more valid (1.39, SD=.67) than invalid syllogisms (.78, SD=.70) when these were believable ($t=13.059$, $p<0.001$), they solved correctly more invalid (1.37, SD=.65) than valid syllogisms (1.06, SD=.76) when these were unbelievable ($t=-6.284$, $p<0.001$).

Next, we examined the relationship between resistance to belief bias and cognitive ability and thinking dispositions. In agreement with Macpherson and Stanovich (2007) we used number of inconsistent syllogism answered correctly as the best correlational measure of the ability to overcome the belief bias despite the fact that there was no evidence of ceiling effect in our sample. There was no correlation between cognitive ability and resistance to belief bias ($r=.094$, $p=.059$) and rational integration (MRMS) and resistance to belief bias ($r=-.004$, $p=.929$).

Because of the significant differences between individual syllogism (due to direction of conclusion or their specific type) we performed correlational analysis for all individual syllogisms and their various combinations and these results are presented in Table 2.

Table 2 Correlation between individual syllogisms and cognitive ability and master rationality motive

	cognitive ability (VMT)	MRMS
Valid-believable Preferred	-0,015	0,08
Valid-believable Non-preferred	0,075	0,066
Invalid-unbelievable Preferred	0,024	0,006
Invalid-unbelievable Non-preferred	0,064	-0,057
Valid-unbelievable Preferred	,112*	-0,066
Valid-unbelievable Non-preferred	,118*	0,046
Invalid-believable Non-preferred	-0,004	0,045
Invalid-believable Preferred	-0,017	-0,039
syllogism sum Valid-Believable	0,039	,101*
syllogism sum Invalid-Believable	-0,014	0,006
syllogism sum Invalid-Unbelievable	0,064	-0,041
syllogism sum Valid-Unbelievable	,146**	-0,011
syllogism sum total	,117*	0,025
consistent syllogisms	0,071	0,043
inconsistent syllogisms	0,094	-0,004

*Correlation is significant at the 0.05 level (2-tailed).

**Correlation is significant at the 0.01 level (2-tailed).

It seems that cognitive ability was most related to correct solution in valid-unbelievable syllogisms regardless the direction of the conclusion (preferred or non-preferred), although the relationship is rather weak. Interestingly, master rationality motive was related only to performance in valid and believable syllogisms.

4. Discussion

One of the aims of this paper was to examine which kind of syllogisms is the most suitable for assessing resistance to belief bias as one of the major aspects of resistance to miserly processing, which is hypothesised to be major dimension of fluid rationality (Stanovich, 2011). As expected, belief bias was most associated with inconsistent syllogism problems. Direction of conclusion did not have major effect on the solution, with the only exception of valid-unbelievable problems, where formulation of conclusion in the preferred direction lead to average score comparable with scores in solving consistent syllogisms (even higher than for invalid-unbelievable syllogisms with conclusion formulated in non-preferred way).

As expected, the inconsistent syllogisms proved to be most difficult (only 5.5% of the sample solved correctly all 4 inconsistent syllogisms, in contrast with 23.3% who solved correctly all 4 consistent syllogisms). This was true regardless of the direction of conclusion formulation, with the only one exception – valid-unbelievable syllogism with preferred direction of conclusion. We can only speculate, but maybe the reason for this result is the concrete content of the syllogism (judges), with conclusion “Some judges do not have good education”, which in Slovakia due to many scandals connected with judicial sphere has become more believable than unbelievable. (Scandals connected with legal colleges, where people can “buy” education, when their parents are already in legal occupation, dishonesty of lawyers and especially judges due to their political and mafia connections, etc.).

Morley et al. (2004) suggested that belief bias is primarily associated with the rejection of unbelievable conclusion and is hence a negative or “debiasing” effect, because there is significant reduction in the acceptance rates of unbelievable conclusion especially for invalid problems. They distinguish between negative belief bias

(rejection of unbelievable conclusions) and positive belief bias (increased acceptance of believable conclusion). Our results revealed that, in fact, people were more able to solve correctly invalid problems ($M=1.54$, $SD=.24$), than valid ($M=1.39$, $SD=.26$) problems ($t=9.377$, $p<.001$).

The main aim of this paper, however, was to explore resistance to belief bias and its relationship with cognitive ability and motivation to be rational. We found only weak relationship between valid and unbelievable syllogisms and cognitive ability, which means that people with higher cognitive ability were better able to resist belief bias (or maybe they just knew better how to solve syllogisms and de-contextualize them from the content). Markovits and Nantel (1989) found in their study that the belief-bias effect exists independently of the participants' abstract reasoning abilities (using the task with abstract syllogisms). Stanovich (2011b) explains the lack of mutual relationships between typical cognitive abilities test (algorithmic level) and tests of critical thinking, such as syllogisms (reflective level) by partitioning Type 2 processes into algorithmic and reflective mind. Algorithmic mind (efficiency of cognitive processes) is usually assessed by test measuring optimal performance, while reflective mind (ability to recognize the need for more effortful thinking) is usually assessed by test measuring typical performance. Importance of the instruction that makes the necessity to adhere to strictly logical rules and to de-contextualize salient was shown by many studies (e.g. Čavojová & Hanák, 2014b; Evans, 2003; Jurkovič, Čavojová, & Hanák, 2014) and this effect can also explain our results. While during intelligence testing participants knew exactly that their cognitive abilities were tested and tried to perform at their best (and the test itself is highly abstract and de-contextualized to be culture-fair), the syllogism task was part of a larger battery and although the instruction was to take into account only information from the premises, they were probably not so motivated to show their best performance and the score reflects more typical performance of students (in some cases maybe even to get over with a task necessary for a credit as quickly as possible).

In this study we were able to identify syllogistic problems that created the strongest belief bias (and thus to differentiate between cognitive misers and people resistant to belief bias) and which can be used in further studies to test Stanovich's proposed framework of cognitive errors. However, some questions still remain. For instance, which is the most predictive for real-life rationality – testing optimal (cognitive abilities) or typical performance (critical thinking skills)? It is obviously important to have some level of cognitive abilities to be able to come to the correct solution, but for real-life performance it is probably more important to be able to detect the need for using one's abilities properly. However, self-report measures of rational motivation did not prove very telling of one's actual performance. Another important consideration in Stanovich's theory is that he places resistance to belief bias (measured by paradigm of syllogism testing) within dimension of resistance to miserly processing, which should be a part of fluid rationality. However, it can be as well part of crystallized rationality and represent the mindware gaps. Solving syllogisms correctly (regardless of their content, figure and direction of conclusion) is just a matter of learning a correct algorithm (e.g. using Venn's diagrams), which clearly represents a "mindware gap". This has a huge implication for education of (not only) future teachers. It means that we are able to learn some strategies that would help us to function more rationally and efficiently in modern world and that inclusion of "old-fashioned" disciplines, such as logic, into a modern curriculum should be of high importance.

Acknowledgements

This work was supported by Slovak grant agency of Ministry of Education VEGA 2/0064/13 "Decision making of experts: Using intuition for solution of strategic tasks" awarded to Vladimíra Čavojová.

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Beyond the literal: Teaching visual literacy in the 21st century classroom

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Abstract

Visual imagery and composition inherently have the power to shape comprehension and interpretation beyond the literal. Today's students increasingly inundated with a steady stream of imagery from multimedia platforms including the Internet (i.e., social media – Facebook, Instagram, Twitter), television, film and advertisements (White, 2012) are global consumers of media in their everyday lives yet they often lack the skills necessary to move beyond passive receivers of visual media messages. Visual literacy is vital for 21st Century learners and those who teach. Classrooms can become spaces for students to effectively communicate in and contribute to analytical and global dialogue for discussions of race and diversity, multicultural life and history thus encouraging students to become active deconstructionists of visual grammar.

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Peer-review under responsibility of the Sakarya University.

Keywords: Visual Literacy; Critical Analysis

1. Introduction

Contemporary culture is a visual culture and has become increasingly dependent on the capacity to communicate instantly and universally. As visual images become the predominant form of communication across a wide range of formats visual imagery and composition inherently have the power to shape our comprehension and the interpretation of our world beyond the literal.

Today's students are now global consumers of media and visual grammar. In their everyday lives they are increasingly inundated with a steady stream of imagery from multimedia platforms including the Internet (i.e., social media – Facebook, Instagram, Twitter, etc.) as well as television, film and advertisements (White, 2012). However they often lack the skills necessary to move beyond passive receivers of visual media messages.

One could ask of teachers of 21st century college students what kind of student do they want? The best answer would be -- a visually literate person. To be visually literate, a person should be able to read and use visual language including the ability to successfully decode, interpret and evaluate visual messages and to encode and compose meaningful visual communication (Hattwig, Bussert, & Burgess, 2013). Ideally courses that teach visual literacy should focus not only on the how to use a camera (the means to making visual imagery) but more importantly focus on visual literacy as a context for visual storytelling.

It has become vital that 21st century students, as learners and global citizens, transcend from passive receivers of visual messages in media to active deconstructionist of visual grammar given the exploding technological advances in multimedia. The kind of visual stories our students tell with so many means of production at their fingertips is an important consideration for educators. Is it enough for our students to point and shoot with a cell phone camera? Can these image-makers really "see" as they look at their subjects? Are they able to move beyond a surface or superficial level of understanding? Can they produce visual images that reflect a human element . . . images that have a "soul?"

Visual literacy is essential for 21st century learners and those who teach. It is critical that students develop skills to create and utilize visual grammar to communicate and contribute to a global dialogue. Because most of our students have access to smart phone devices that have camera functionality, the integration of visual literacy into their education becomes paramount. Classrooms can become spaces for students to effectively communicate in and contribute to analytical and global dialogue for discussions of race and diversity, multicultural life and history thus encouraging students to become active deconstructionists of visual grammar.

2. Visual Literacy Defined

Visual literacy can be defined as a set of abilities that enables an individual to effectively find, interpret, evaluate, use, and create images and visual media. Visual literacy skills equip a learner to understand and analyze the contextual, cultural, ethical, aesthetic, intellectual, and technical components involved in the production and use of visual materials (acrlvislitstandards, 2011).

A visually literate individual is both a critical consumer of visual media and a competent contributor to a body of shared knowledge and culture. Across disciplines, students engage with images and visual materials throughout the course of their education. Although expected to understand, use, and create images in academic work, students are not always prepared to do so. Scholarly work with images requires research, interpretation, analysis, and evaluation skills specific to visual materials. These abilities cannot be taken for granted and need to be taught, supported, and integrated into the curriculum.

Course objectives often include the development of skills to interpret, translate, construct and apply images as well as image management and presentation. Students become better critical thinkers. They are encouraged to become active deconstructionists of visual grammar, and emerge from these courses with the ability to produce images that effectively communicate messages to audiences, messages that have "a soul." Such as courses have efficacy/impact across disciplines and majors and offer far- reaching benefits to the institution.

3. Learning Outcomes to Consider

Learning outcomes to consider when teaching visual literacy (acrlvislitstandards, 2011) include the following: conducting effective image searches; recognizing how the image search process is affected by image rights and

use restrictions; selecting the most appropriate image sources for the current project

Additionally the visually literate student situates the image in cultural, asocial and historical contexts; describes the intended audience for an image; validates interpretation and analysis of images through discourse with others; critiques persuasive or manipulative strategies that may have been used in image production to influence interpretation; evaluates the use of visual signs, symbols; and conventions to convey meaning.

During the production of image the visually literate student should explore choices made in the production of an image to construct meaning or influence interpretation (e.g., framing, composition, included or excluded elements, staging); identify the physical, technical, and design components of an image; examine an image for signs of editing, alteration, or manipulation (e.g., cropping, color correction, image enhancements).

Other learning outcomes include: exploring representations of gender, ethnicity, and other cultural or social identifiers in images; describing the intended audience for an image; validating interpretation and analysis of images through discourse with others; critiquing persuasive or manipulative strategies that may have been used in image production to influence interpretation; evaluating the use of visual signs, symbols, and conventions to convey meaning. Images as “visual texts” assist in revealing perpetual representations and socio-cultural perspectives and can offer students the opportunity to enhance their media literacy, self-reflect, and critically make connections through the use of multiple channels discourse.

4. A Visual Literacy Curriculum

In the curriculum at Clark Atlanta University for the undergraduate course, “*African-American Images in the Media*”, visual and media literacy are used as part of the teaching methods and experiences. In this course students explore the characterization and interpretation of the image of African-Americans in media and attempt to qualify their value as a catalyst for social, political, and cultural change.

The course functions to assess the dynamics of basic thought propagated through imagery, positive and negative, in films, television, and other media. Students are assigned analysis course work in which they apply the principles of film analysis to moving image content screened in class and assigned viewings outside of class. Students must synthesize what they’ve read from assigned readings for the course. They must consider a new outlook on the moving image content after having read the assigned text. This includes: interpreting **visual grammar** and **theme** (the visual content’s message(s) and/or meaning(s) communicated by the director). Visual grammar tools include, but are not limited to: Character actions, character wardrobe, locations (props, production design, colors utilized in the content, editing (pacing, relationship of one shot to the next) as well as all camera techniques.

Students are also instructed to pay attention to the cinematic style, conventions and the common themes within the content of the moving image. Some of the common conventions within the content of films and moving image include: Location as character, composed music, choice of cast, directing style and the use of camera shots. Other elements of moving image content students are instructed to consider are: characters’ wants and values, characters’ physical/visual description, use of language/dialogue, character arc/transformation or lack of transformation.

The “*African American Images in Media*” course takes a critical analysis approach to examining and exploring visual literacy in moving image content. Ultimately students learn to critically analyze and deconstruct depiction of African Americans in films, television, advertising, and within Internet media content. They learn to identify and discover the social, cultural and artistic themes that resonate within media content. Students also derive their own specific insights through both in-class discussions and analysis.

The course provides students with basic tools and skills to critically analyze the social, technical and conceptual aspects of how filmmakers and media makers construct visual imagery that reflect narrative, historical, ideological and cultural landscapes within our world. Students become familiar with the depictions of African Americans from a historical perspective, and they learn to discuss in detail the cultural and aesthetic approach to moving image production. They gain a working knowledge of film vocabulary as well as major theoretical approaches and analytical tools used in decoding film grammar. Analyzing depictions of African American and learning to deconstruct moving image content, ultimately informs the students’ own media and film aspirations.

5. Conclusion

In this paper we have described the need for classrooms to become spaces for students to effectively communicate in and contribute to the analytical and global dialogue for discussions of race and diversity, multicultural life and history thus encouraging students to become active deconstructionists of visual grammar. Although many courses in the Department of Mass Media Arts and other departments at Clark Atlanta University use some aspect of visual literacy as part of the teaching methodology, the following courses - “Visual Storytelling and Composition” and “Media Activism” - rely heavily on visual literacy course objectives and learning outcomes. Using multimedia images as “visual texts” assist in revealing perpetual representations and socio-cultural perspectives which offer students the opportunity to enhance their media literacy, self-reflect, and critically make connections through the use of multiple channels of discourse.

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INTE 2014

Bilgi Güvenliği Farkındalık Eğitiminde Bilgisayar ve Eğitim Teknolojilerinin Önemi

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Abstract

Eğitim teknolojisi, sürekli gelişen ve yenilikler ortaya çıkaran bir alandır. Gelişime açık olan toplumlar dünya şartları gereği eğitim ve öğretimde geliştirilen yöntem ve araçları kullanarak değişime ayak uydurmaktadır. Eğitim teknolojisi de bu bağlamda teorik bilgiyi, bilgi güvenliğini ve uygulama arasındaki boşluğu gidererek bireyi geliştirme ve ona etkili öğretme yolları için yöntemler, ortamlar bulmak görevini üzerine almıştır. Günümüzde her geçen gün önemini artırarak hayatımızın içine giren teknoloji, yerini bilgisayar destekli ortamlarda sağlamlaştırmaktadır. Bu nedenle öğrencilere “teknoloji bağlamında yeniliklere açık, bilgisayar destekli yetenek, bilgi, beceri ve davranış geliştirme” öğretilerinin kazandırılması gerekmektedir. Ancak bu bilgilerin sağlanması ve güvenliğinin sağlanması oldukça zorlaşmıştır. Yasal olmayan yollardan ele geçirilen bilgiler, başta eğitim olmak üzere tüm hususlarda toplumu zarara uğratmaktadır. Bu çalışma bilgisayar gibi devamlı kendini yenileyen teknolojik araçların nasıl ve ne ölçüde kullanılacağı ve bu araçların bilgisayar destekli eğitimdeki faktörünün bilgi güvenliğini kapsamaktadır. Bilgisayar kullanımının hızla yaygınlaştığı ülkemizde, hem eğitim hem de bilgisayar güncelliğini hiçbir zaman kaybetmeyecektir, bu yüzden bilgisayar destekli eğitimin hayatımızı ne şekilde etkilediği ve bu eğitimin bilgi güvenliği açısından irdelenmesi önemli bir konudur.

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Peer-review under responsibility of the Sakarya University.

Keywords: Bilgisayar; bilgi güvenliği; eğitim; teknoloji; gelişim.

Giriş

Bilgi güvenliği, günümüzde önemi artan konuların başında gelmektedir. Teknolojinin hızlı değişmesi ve bilgisayar sahipliği oranlarının artması doğru orantılı olarak bilginin de çoğalmasını sağlamıştır. Bilgisayar ve teknolojiye bu hızlı gelişim insan hayatını kolaylaştırır da bazı riskleri beraberinde getirmektedir. Bilinçsiz bilgisayar kullanımı ve insanların kendi kişisel bilgilerini paylaşma merakı bilgi güvenliği konusunda sık karşılaşılan konuların başında gelmektedir.

Teknolojik dönüşüm ve hızlı bir evrimin yaşandığı günümüzde daha çok bilgi daha küçük aygıtlar üzerinde saklanabilir, taşınabilir, çoğaltılabilir hale gelmiştir. Uygulama yazılımları ve internet tarafındaki gelişmelerle de bilgilerin işlenmesi, bir değere dönüşmesi daha pratik hale gelmiştir. Tüm bu insan hayatını kolaylaştıracak teknolojik gelişmeler diğer yanda uygunsuz kullanım, bireylerdeki risk algısının zafiyeti, bilgi güvenliği tehditlerinden habersizliği karşısında bir takım olumsuzlukları, kötü amaçlı kullanımları ve bir takım telafisi güç bilgi güvenliği risklerini de bünyesinde taşımaktadır [1].

Bilgisayar ve haberleşme teknolojilerinde yaşanan baş döndürücü gelişmeler ve özellikle İnternet’in katalizör etkisi ile insanların, çalışma, iletişim kurma ve her türlü günlük ihtiyaçlarını karşılama biçimi sürekli bir dönüşüm halindedir [2, 3]. Günümüz toplumunda insanlar, bilgisayar ile küçük yaşlarda tanışmakta; evde ve okulda, gerek ödevleri için gerek eğlence için bilgisayardan yoğun bir şekilde istifade etmektedir [4]. Özellikle 1979 yılından

sonra doğan ve “Y Kuşağı” olarak adlandırılan kesim, gerek nüfus bakımından gerekse kullandıkları yeni teknoloji bakımından ön saflarda yer almaktadır. Bu kuşak ve günümüz çocuk ve gençleri; genelde teknolojinin, özelde bilgisayar ve İnternet’in etkileşim ve iletişim isteyen kısımlarında en çok yer alan aktörlerin başında gelmektedir [5, 6].

Bilişim teknolojileri ile bu teknolojilerin hammaddesi, girdisi ve çıktısı olan bilginin önemi tam olarak anlaşılmış değildir. Bilginin ne olduğu ve ne gibi bir öneme ve potansiyele sahip olduğu yeterince anlaşılmadığından; bilişim teknolojileri ve bilgi güvenliği konusunda gereken ehemmiyet gösterilememektedir [7–8].

Veri, Bilgi ve Özbilgi

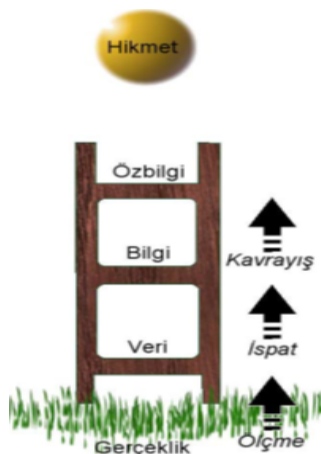
Bilginin yaşadığımız çağa damgasını vuran bir varlık olduğu bir gerçektir. Bu açıdan bakıldığında, çağımızın altın değerindeki hammaddesi olan bilgiyi tanımlamak, kavramak ve bilgi ile ilgili hususları incelemek, insanlığın başlangıcından itibaren geçen süreçte ileriye yönelik gelişimimizi şekillendirmenin en önemli anahtarıdır [10]. Günümüzde bilgi ön plana çıkmış gibi gözükse de, aslında bilgi; dün ve bugünün anahtarları iken, geleceğin şekillenmesinde de her zaman anahtar rollere sahiptir.

Bilginin doğası ile ilgili aşağıda derlenen sözler, bilginin değerini ve boyutlarını bir kez daha gözler önüne sermek açısından faydalı olabilir [11].

Bilgi;

- Boşlukta ve zamanda yer kaplar.
- Gürültü çıkarmadan hareket edemez.
- Hareketi için enerji gerekir.
- Yaşam ve herhangi bir düzenli etkinlik için gereklidir.
- Hem maddesiz biçim, hem biçimsiz maddedir.
- Ağırlığa sahiptir. Bir gigabayt, bir parmak izinden daha az ağırlıktadır.
- Zaman içinde hareketli veya donmuş olabilir.
- Bir soruya tatmin edici, belki de rahatsızlık verici bir cevaptır.
- Katı hale sahiptir, donarak katılaşır (depolama).
- Sıvı hale sahiptir, akar (iletişim).
- Bir yerlerde bilgi hareket eder, evren gümbürder ve gerçeği gürlür.
- Maddeden farklı olarak bilgi aynı anda birden fazla yerde olabilir.
- El sıkışma, baş sallama, bakış veya iç çekiştir.
- Rastsallık denizinde parlar.

Bilgi çağında ilerlemek, bir merdivenin basamaklarını kullanarak bir üst seviyeye çıkmaya benzetilebilir [12]. Şekil 1’de gerçeklik (reality) ile hikmet (wisdom) arasında gösterilen bu merdivenin basamakları, veri (data), bilgi (information), özbilgi (knowledge) basamaklarıdır. Çoğu durumda, her basamak, atlanmadan teker teker geçilir. Yukarıya çıktıkça elimizdeki şeyin miktarı azalırken, değeri artar. Yine yukarıya çıktıkça, bir sonraki basamağa adım atmak daha da zorlaşır veya daha çok çaba ister. Bu yüzden, merdivenin alt basamaklarında verinin ve bilginin paylaşımı daha kolay iken yahut insanlar veya çalışanlar elde ettikleri veri ve bilgileri paylaşmaya daha açık iken, daha yukarı çıkıldığında özbilginin paylaşımı için aynı şey söylenemez [13].



Şekil.1. Gerçeklikten hikmete ulaşmak için aşılması gereken bilgi basamakları[9].

Genel olarak bilimin getirdiği yöntemlerden, ölçme ile eldeki gerçeklikten veriye, ispat ile veriden bilgiye ve kavrayış ile bilgiden özbilgiye ulaşılır [14]. Özbilgiden hikmete ulaşma, sentezleme içeren bir düşünüş gerektirir. Bu düşünüş, fikirlerin öyle bir şekilde bir araya getirilmesidir ki ulaşılan bütün parçalarının toplamından daha büyüktür [15].

Bir başka gözlem de, merdivenin alt basamaklarında, daha algoritmik ve programlanabilir bir yaklaşıma ihtiyaç duyulurken, daha yukarı basamaklar, algoritmik olmayan ve programlanamayan bir yapı arz etmesidir [16]. Veri ve bilginin iletiminde bilişim teknolojileri kullanılabilirken, özbilgi de buna ek olarak insan etkeni de işin içine girmektedir [17]. Özbilginin gerçeklik haline dönüştürülmesi için yönetim biliminden yararlanılır.

Bilgi ve özbilgi kavramları veya basamakları, ülkemizde çoğu kez birbirleri ile karıştırılmaktadır [7].

Verinin; İngilizce karşılığı olarak kullanılan “data”, Latince “datum” kelimesinden (çoğul şekli “data” ve “vermeye cesaret etmek” fiilinin geçmiş zamanı, dolayısıyla “verilen şey”) gelmektedir. Latince “data” (dedomena) kavramının M.Ö. 300 yıllarında Öklid’in bir çalışmasında geçtiği bildirilmektedir [18]. Dilimizde de “verilen şey” anlamında “veri” sözcüğü kullanılmaktadır. Bilişim teknolojisi açısından veri, bir durum hakkında, birbiriyle bağlantısı henüz kurulmamış bilinenler veya kısaca, sayısal ortamlarda bulunan ve taşınan sinyaller ve/veya bit dizeleri olarak tanımlanabilir.

Bilgi; verinin belli bir anlam ifade edecek şekilde düzenlenmiş halidir. Bu aşamada, veri ve ilişkili olduğu konu, bilgi üretecek şekilde bir araya getirilir. İşlenmiş veri olarak da ifade edilebilecek bilgi, Shannon tarafından “bir konu hakkında var olan belirsizliği azaltan bir kaynak” olarak tanımlanmıştır. Kısaca, veri üzerinde yapılan uygun bütün işlemlerin (mantığa dayanan dönüşüm, ilişkiler, formüller, varsayımlar, basitleştirmeler, vs.) çıktısı, bilgi olarak ifade edilebilir.

Özbilgi; tecrübe veya öğrenme şeklinde veya iç gözlem şeklinde elde edilen gerçeklerin, doğruların veya bilginin, farkında olunması ve anlaşılmasıdır.

Verileri bir araya getirilip, işlenmesiyle bilgiyi oluştursa da özbilgi, kullanılan bilgilerin toplamından daha üstte bir kavramdır. Bir güç oluşturabilecek, katma değer sağlayabilecek veya bir araç haline dönüşmek üzere, daha fazla ve özenli olarak işlenmiş bilgi, asıl değerli olan özbilgidir. Özbilgi, ne olduğunu (know-what), niçin olduğunu (know-why), nasıl olduğunu (know-how) ve kim olduğunu (know-who) bilmek şeklinde dört sınıftan oluşur. Ne olduğunu bilmek, gerçeklerin toplamıdır ve bilgiye en yakın olan sınıftır. Niçin olduğunu bilmek, teknolojik gelişmenin altında yatan ilke ve yasaların açıklandığı bilimsel özbilgidir. Nasıl olduğunu bilmek, bir şeyi yapabilme becerisidir. Kimin olduğunu bilmek, kimin neyi ve kimin neyi nasıl yapılacağını bildiğini bilmek olarak özetlenebilir [19].

Hikmet (wisdom), tasavvur, ileri görüş ve ufkun ötesini görme yetisi ile en ileri seviyede soyutlama ve bir kişinin özel bir iş sahasındaki meslek hayatı boyunca elde edilmiş deneyimin özüdür [20]. Hikmet, ayrıca, güvenilir yargıda bulunmak ve karar vermek için özbilginin nasıl kullanılacağını kavramak olarak da tanımlanmaktadır [21].

Veri, bilgi, özbilgi ve hikmet gibi kavramların bilişim teknolojilerinin temel yapı taşları olduğunu göz ardı etmemek gerekir. Bu bakış açısı, bilginin önemini ve bilgi ve bilgisayar güvenliğini her zaman öncelikli bir konumda tutmakta yardımcı olacaktır. Her ne kadar, bilgi ile ilgili belirtilen kavramlar, burada bilişim teknolojileri ve özbilgi yönetimi açısından değerlendirilse de bu kavramların altında binlerce yıllık bir insanlık medeniyetinin yattığını da hatırlatmak gerekir. Bilginin önemini kavrayan tarihteki her uygarlık, onu korumaya yönelik olarak, farklı güvenlik yöntemleri geliştirmişlerdir (8-22).

Günümüzde bilginin üretilme, depolanma, korunma, kullanılma, paylaşma, yayılma, etkileşme ve artma hızı, teknolojinin getirdiği hızlı bilgi işleme ve iletişim araçları ile baş döndürücü bir hal almıştır [9].

Bilgi ve Bilgisayar Güvenliği

Elektronik ortamlarda verilerin veya bilgilerin depolanması ve taşınması sırasında yapı bütünlüğü bozulmadan izinsiz erişimlerden korunması amacıyla güvenli bilgi işleme platformu oluşturma çabalarının tümü “Bilgi Güvenliği” olarak ifade edilebilir. Bu platformun işlevselliğinin sağlanması için uygun güvenlik politikaları belirlenmeli ve uygulamaya konulmalıdır. Bu politikalar, faaliyetlerin sorgulanması, erişimlerin izlenmesi, değişiklik kayıtlarının tutulup değerlendirilmesi, silme işlemlerinin sınırlandırılması gibi bazı kullanım şekillerine indirgenebilmektedir. Bilgi güvenliği daha genel anlamda, güvenlik konularını detaylı olarak ele alan “güvenlik mühendisliği” nin bir alt alanı olarak görülmektedir.

Bilgi ve bilgisayar güvenliğinde, karşı taraf, kötü niyetli olarak nitelendirilen kişiler (korsanlar veya saldırganlar) ve yaptıkları saldırılardır. Var olan bilgi ve bilgisayar güvenliği sistemini aşmak veya atlatmak, zafiyete uğratmak, kişileri doğrudan veya dolaylı olarak zarara uğratmak, sistemlere zarar vermek, sistemlerin işleyişini aksattırmak, durdurmak, çökertmek veya yıkmak gibi kötü amaçlarla bilgisayar sistemleri ile ilgili yapılan girişimler saldırı veya atak olarak adlandırılmaktadır. Saldırganlar, amaçlarına ulaşmak için çok farklı teknikler içeren saldırılar gerçekleştirmektedirler. Saldırı türlerinin bilinmesi, doğru bir şekilde analiz edilmesi ve gereken önlemlerin belirlenmesi, bilgi güvenliği için büyük bir önem arz etmektedir [9].

1. Bilgi Güvenliği ve Tehditler

Bilgi güvenliğine yönelik tehditler aşağıda detaylandırılmaktadır. Ayrıca Şekil 2’de bilgi güvenliği ve tehditleri gösterilmektedir.

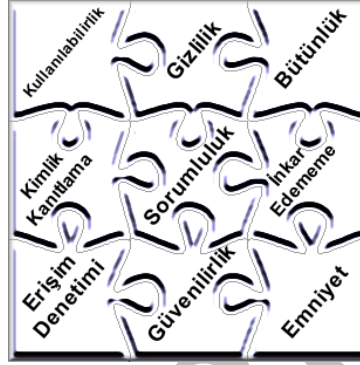
- Zararlı Yazılımlar; virüsler, keylogger, truva atları, spyware, spam, sniffer, phishing, botnet, exploit vb.
- Doğal Afetler; deprem, su baskını, yangın, yıldırım düşmesi vb. afetler ve bunların oluşturulabileceği fiziksel hasarlar.
- Sosyal Medya ve Mühendislik.
- Şifre Güvenliği, Açıkları ve Fiziksel Güvenlik.
- Hackerlar ve Bilgiye Erişim; Korsanlar ve bilgiye erişime yönelik tehditler.



Şekil.2. Bilgi Güvenliği ve Tehditler [1].

.2. Güvenlik İlkeleri

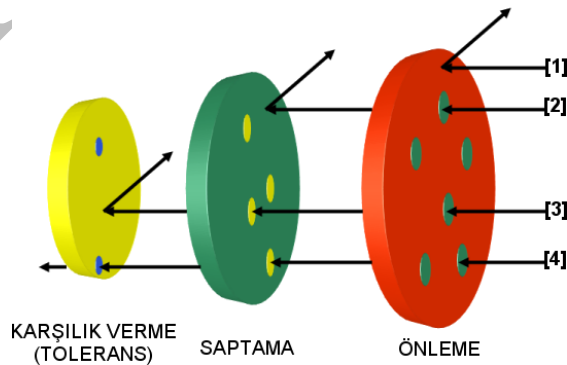
Gizlilik (confidentiality), bütünlük (integrity), kullanılabilirlik (availability), kimlik kanıtlama (authentication) ve inkâr edememe (non-repudiation) bilgi güvenliğinin en temel ilkeleridir. Bunun dışında sorumluluk (accountability), erişim denetimi (access control), güvenilirlik (reliability) ve emniyet (safety) etkenleri de bilgi güvenliğini destekleyen unsurlardır. Bu unsurların tamamının gerçekleştirilmesiyle ancak bilgi güvenliği tam olarak sağlanabilecektir. Şekil 3’den de görülebileceği gibi, bu ilkelerin bir veya birkaçının eksikliği, güvenlik boyutunda aksamalara sebebiyet verebilecektir. Bu ilkelerin birbirini tamamlayıcı unsurlar olduğu hiçbir zaman unutulmamalıdır.



Şekil.3. Güvenlik Unsurları [9].

.3. Güvenlik Süreçleri

Bilgi güvenliği çerçevesinde kurulacak güvenlik sistemi altyapısının ve politikasının doğru bir şekilde belirlenebilmesi için korunmak istenen bilginin değerlendirilmesi, güvenlik yönetiminin doğru ve eksiksiz bir şekilde yapılması gerekir. Güvenlik yönetimi, bilgi ve bilgisayar güvenliğini olumsuz yönde etkileyecek faktörlerinin belirlenmesi, ölçülmesi ve en alt düzeye indirilmesi sürecidir. Şekil 4’de güvenlik süreçlerine bir örnek verilmiştir. Bu şekilde, 4 farklı saldırı “1”-“4” ile gösterilmiştir. Şekilden de açıkça görülebileceği gibi, “1” numaralı saldırı, hemen önleme safhasında engellenirken; “2”, “3” ve “4” numaralı saldırılar bu safhada önlenememiştir. Önleme sürecini atlatan bu saldırılardan “2” numaralı saldırı, saptama aşamasında tespit edilip, bertaraf edilirken; “3” ve “4” numaralı saldırılar, saptama aşamasından da geçebilmiştir. Belirlenen tolerans ile tasarlanmış son aşama olan karşılık verme safhasında, “3” numaralı saldırı önlenirken; bütün aşamaları atlatıp geçen “4” numaralı saldırı, bütün güvenlik süreçlerini geçip, sisteme zarar vermiştir [9].



Şekil.4. Güvenlik Süreçleri ve Saldırlara Tepkileri [9].

SONUÇ

İnsanoğlu, bilgi güvenliği süreçlerinin en zayıf halkası olarak kabul edilmektedir. Ancak bilgi güvenliği farkındalık eğitimleri ile kişiler bu zayıflıktan kurtulabilir, bilinçlendirme faaliyetleri ile bilgi güvenliği sürecinin en önemli unsuru olabilir. Bu faaliyetler bireysel bazda yarar sağlayacağı gibi kurumsal bazda da birçok fayda getirebilir. Bilgi güvenliği farkındalık eğitim ve programları, kurumlarda en üst yönetimlerden başlayarak en alt seviyedeki uç bir kullanıcıya kadar yaygınlaştırılmalı ve sunulmalıdır. Kurumlar ve bireyler ellerindeki en değerli varlık olan bilgiyi korumak, bilginin bütünlüğünü ve güvenilirliğini sağlamak, gerektiğinde ise ona ulaşabilmek için bir bilgi güvenlik politikası ya da kuralları etrafında birleşmeli, aynı zamanda kendilerine yol gösterici olan bu kurallardan öncelikle haberdar olmalıdır. Diğer taraftan güncel olarak sosyal hayatta ne tür bilgi güvenlik risk ve tehditleriyle karşılaşabilecekleri konusunda da bilgi sahibi olmalıdır. Bu farkındalığı oluşturmada en temel ve etkili yöntem ilgili bireylerin bir farkındalık eğitim programından geçirilmesiyle mümkün olabilecektir.

Farkındalık eğitimi vermek isteyen kurumlar içerik olarak ne sunacakları konusunda bilgiye ihtiyaç duymakta ve bilgiyi arayış içerisine girebilmektedir. Bu sebepten dolayı bilgi güvenliği farkındalık eğitimlerinde bilgisayar ve eğitim teknolojilerinin önemi büyüktür. Eğitim içerikleri geliştirilirken etkileşimli materyaller kullanmak öğretilmek istenen bilgilerin kalıcılığını sağlayacaktır. Gelişen teknoloji ile birlikte örgün olarak verilen dersler web tabanlı eğitimle de verilebilmektedir. Web tabanlı eğitim platformları hem istenildiği zaman takip edilebilmesi hem de aynı anda birçok kişiye eğitim verilebilmesi açısından oldukça yararlıdır.

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INTE 2014

Bilgisayar Dersine Yönelik Üniversite Öğrencilerinin Öğrenme Güdülenmelerinin Belirlenmesi ve Yeterlik Algısı Açısından İrdelenmesi

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Güdülenme öğrenme için gerekli ön şartlardan biri olmaktadır. Kişiyi öğrenmeye sevk edecek önemli bir neden olmadıkça öğrenmeye karşı ilgisi gelişmeyebilir. Üniversite öğrencilerinin ilgili derse yönelik güdülenmeleri yeterlilik algılarını ve akademik başarılarını etkileyebilir. Bu bakımdan özellikle ağırlıklı olarak sosyal bilimler alanında öğrenim gören üniversite öğrencilerin Bilgisayar dersine yönelik güdülenmelerinin dolayısıyla bilgi ve iletişim teknolojilerine ilgilerinin belirlenmesi verimlilik açısından önem arz etmektedir.

Betimsel nitelikteki bu araştırmada, Pintrich, Smith, Garcia ve McKeachie'nin (1991) tarafından geliştirilen (Motivated Strategies for Learning Questionnaire) ve Büyüköztürk, Akgün, Özkahveci ve Demirel (2004) tarafından Türkçe'ye uyarlanan Güdülenme ve Öğrenme Stratejileri Ölçeği (GÖSÖ) kullanılmıştır. Güdülenme ve Öğrenme Stratejileri Ölçeğinin güdülenme alt boyutu ele alınarak araştırma bulguları olarak kullanılmıştır.

Araştırmaya Eğitim Fakültesi, Rehberlik ve Psikolojik Danışmanlık Bölümünde öğrenim gören ve bilgisayar dersini alan 53 üniversite öğrencisi katılmıştır. Dönem başında öntest ve dönem sonunda sontest olarak uygulanan ölçekten elde edilen verilerle öğrencilerin Bilgisayar dersine yönelik güdülenmelerin ne olduğu ve dersin güdülenme düzeylerindeki değişime etkisi incelenmiştir. Ayrıca öğrencilerin Bilgisayar dersine yönelik sahip oldukları güdülenme düzeyleri her bir alt faktörleri ile ele alınmış, öntest ve sontest arasındaki değişim incelenmiş ve öğrencilerin cinsiyetlerine göre karşılaştırılmıştır. Verilerin analizinde frekans analizi ve t testi kullanılmıştır. Araştırma sonuçları doğrultusunda önerilerde bulunulmuştur.

Anahtar Kelimeler: Güdülenme, bilgisayar dersi, yeterlilik algısı

GİRİŞ

Güdülenme öğrenme için gerekli ön şartlardan biri olmaktadır. Kişiyi öğrenmeye sevk edecek önemli bir neden olmadıkça öğrenmeye karşı ilgisi gelişmeyebilir. Öğrencinin öğrenme sürecinde aktif olarak yer alması için, onun bu süreçte katılmaya istekli olması, yani güdülenmiş olması gerekir. Yeterince güdülenmemiş bir öğrenci, öğrenmeye hazır hale gelmemiş demektir. Öğrenmelerin başarıyla sonuçlanması, öğretme sürecine bağlı olduğu kadar, bu süreçte yer alan öğrenenin niteliklerine de bağlıdır. Öğrencilerin öğrenmeye karşı

olan isteksizliği, sürecin başarısızlıkla sonuçlanmasına yol açabilir. Yani güdülenme öğrenme-öğretme sürecini etkileyen en önemli faktörlerden biridir.

Güdülenme kişinin davranışlarının ve beklentilerinin bütünüdür. Güdülenmişlik, isteklerin sonucunda oluşan davranışları içermektedir. Güdülenmiş bir kişi bilgisini, inançlarını başarılı davranışlarla bütünleştirmiş bir kişidir. Güdü, beklentilere bağlı olmasına rağmen, kişinin kendi yeterliklerini algılamasını ve çabasını kontrolünü de içermektedir (Stipek, 1998). Güdü, organizmayı belirli tepkilerde bulunmaya ve sonuç olarak bir şeyler öğrenmeye zorlamaktadır (Selçuk, 1999). Keller güdülenmeyi öğrencinin öğrenmeye istek duymasını sağlayan çabanın yönü ve içsel bir güç olarak açıklamıştır (Keller, 2000).

Okul öğrenmelerinin ortaya çıkmasında ve kalıcılığında pek çok faktörün yanında, öğrencinin öğrenme sürecine katılımının da büyük rolü vardır. Günümüzde öğrenmeye ilişkin görüşlere göre öğrenci, öğretimde sorumluluk alan, öğrenme sürecine aktif ve zihinsel olarak katılan kişi olarak görülmektedir (McCombs, 1988).

Öğrencinin öğrenme sürecinde aktif olarak yer alması için, onun bu sürece katılmaya istekli olması, yani güdülenmiş olması gerekir. Okul öğrenmelerinin başarıyla sonuçlanması, öğretme sürecine bağlı olduğu kadar, bu süreçte yer alan öğrenenin niteliklerine de büyük ölçüde bağlıdır. Öğrencilerin öğrenmeye karşı olan isteksizliği, hedeflerin öğrenci düzeyine uygun olmasına, öğrenme-öğretme sürecinde kullanılan tekniklerin uygun ve yerinde olmasına rağmen, sürecin başarısızlıkla sonuçlanmasına yol açabilir. Yani güdülenme, öğrenme-öğretme sürecini etkileyen en önemli faktörlerden biridir (Kelecioğlu, 1992).

Pintrich ve De Groot (1990), güdüsel yönelme, kendini düzenleyerek öğrenme ve sınıftaki akademik performans arasındaki ilişkiye bakmıştır. Güdülenmeyi beklenti, değer ve duyuşsal bileşenler olmak üzere üç bileşene ayırmışlar ve araştırmanın sonunda beklenti ve değer bileşenlerinin bilişsel yüklemeler ve akademik performansla ilgili olduğu; kendini düzenleyerek öğrenme ve yeterlik algısının da başarının en iyi yordayıcısı olduğunu bulmuşlardır. Buradan hareketle güdülenmenin bilişsel kaynakları olan yeterlik algısı, bilişsel yüklemeler ve kendini düzenleyerek öğrenmenin başarıyı olumlu yönde etkilediği söylenebilir.

Pintrich, Smith, Garcia ve McKeachie (1991) öğrencilerin güdülenme ve kullandıkları öğrenme stratejilerini belirlemek amacıyla geliştirdikleri MSLQ (Motivated Strategies for Learning Questionnaire) ölçeğini uyguladıkları çalışmada, güdülenme ölçeğinin öğrencilerin akademik başarıları ile bekledikleri doğrultuda ilişkili olduğunu ifade etmişlerdir.

Üniversite öğrencilerinin ilgili derse yönelik güdülenmeleri yeterlilik algılarını ve akademik başarılarını etkileyebilir. Bu bakımdan özellikle ağırlıklı olarak sosyal bilimler alanında öğrenim gören üniversite öğrencilerin Bilgisayar dersine yönelik güdülenmelerinin dolayısıyla bilgi ve iletişim teknolojilerine ilgilerinin belirlenmesi verimlilik açısından önem arz etmektedir.

YÖNTEM

Araştırmanın Modeli

Bu araştırma Yıldız Teknik Üniversitesi Eğitim Fakültesi Psikolojik Danışmanlık ve Rehberlik Ana Bilim Dalı'nda okuyan öğrencilerin Bilgisayar dersine yönelik güdülenmelerini belirlemek ve dersin güdülenme düzeylerindeki değişime etkisini incelemek amaçlanmıştır. Ayrıca öğrencilerin Bilgisayar dersine yönelik sahip oldukları güdülenme düzeyleri ile yeterlilik algıları arasındaki ilişkinin incelenmesi de amaç kapsamındadır. Bu nedenle tarama modelinde betimsel bir çalışma tercih edilmiştir. Tarama modeli, geçmişte ve halen var olan bir durumu var olduğu şekliyle betimlemeyi amaçlayan yaklaşımlardır. Araştırmaya konu olan olay, birey ya da nesne, kendi koşulları içinde var olduğu gibi tanımlanmaya çalışılır. Onları herhangi bir şekilde değiştirme, etkileme çabası gösterilmez (Karasar, 2007).

Çalışma Grubu

Araştırmanın çalışma grubunu, Yıldız Teknik Üniversitesi Eğitim Fakültesi Psikolojik Danışmanlık ve Rehberlik Ana Bilim Dalı'nda okuyan ve Bilgisayar dersini alan öğrenciler oluşturmuştur. Araştırmaya katılan öğrenciler; dersi alan 44'ü kız ve 9'u erkek olmak üzere toplam 53 kişidir.

Veri Toplama Araçları

Araştırmada orijinali Pintrich, Smith, Garcia ve McKeachie (1991) tarafından geliştirilen, "Motivated Strategies For Learning Questionnaire" isimli ve Türkçe uyarlaması Büyüköztürk, Akgün, Demirel ve Özkahveci (2004) tarafından yapılan "Güdülenme ve Öğrenme Stratejileri Ölçeği" (GÖSÖ) kullanılmıştır. Bu ölçek, öğrencilerin sahip oldukları güdülenmelerini öğrencilerin kendi yanıtlarına göre belirleyen bir ölçektir.

GÖSÖ, Güdülenme ve Öğrenme Stratejileri olmak üzere iki yapıdan oluşmaktadır. İki ayrı boyutta toplam on beş alt faktörden oluşan GÖSÖ, modüler bir yapıya sahiptir ve uygulayıcının kullanım amacına göre alt ölçeklerden elde edilecek puanlar ayrı ayrı kullanılabilir (Pintrich ve Smith, 1993).

Bu çalışma için ölçeğin Güdülenme kısmı kullanılmıştır. Bu kısım 31 madde ve altı alt faktörden oluşmaktadır. Bu alt faktörler; İçsel Hedef Düzenleme, Dışsal Hedef Düzenleme, Görev Değeri, Öğrenmeye İlişkin Kontrol İnancı, Öğrenme ve Performansla İlgili Öz-Yeterlik ve Sınav Kaygısı faktörleridir. Alt faktörlerin Cronbach Alfa değerleri aşağıdaki tabloda verilmiştir.

Tablo1. Güdülenme Ölçeğinin Alt Faktörlerinin Cronbach Alfa Katsayıları

Alt Faktör İsmi	CA Katsayısı
İçsel Hedef Düzenleme	0.59
Dışsal Hedef Düzenleme	0.63
Görev Değeri	0.80
Öğrenmeye İlişkin Kontrol İnancı	0.52

Öğrenme ve Performansla İlgili Öz-Yeterlik	0.86
Sınav Kaygısı	0.69

Verilerin Analizi

Araştırma sonucunda elde edilen veriler SPSS paket programı kullanılarak analiz edilmiştir. Katılımcılar ölçekte yer alan her bir ifadeye ilişkin katılma düzeylerini “benim için kesinlikle yanlış (1)” ile “benim için kesinlikle doğru (7)” arasında değişen Likert tipi yedili derecelendirme ölçeği üzerinde işaretlemişlerdir. Veri girişi buna göre yapılmıştır.

BULGULAR ve YORUMLAR

Üniversite öğrencilerinin Bilgisayar dersine yönelik güdülenme düzeyi alt faktörlerine ilişkin ortalamalar Tablo 2’de gösterilmiştir.

Tablo 2. Öğrencilerin Güdülenme Düzeyine İlişkin Dağılım

Güdülenme Ölçeği Alt Boyutları	Öntest ortalaması	ss	Sontest Ortalaması	ss
İçsel Hedef Düzenleme	3,74	1,05	4,13	,93
Dışsal Hedef Düzenleme	4,40	1,25	4,67	1,13
Görev Değeri	4,17	1,25	4,55	,98
Öğrenmeye İlişkin Kontrol İnancı	4,22	1,06	4,62	,90
Öğrenme ve Performansla İlgili Öz-Yeterlik	4,04	1,04	4,52	1,13
Sınav Kaygısı	4,57	1,22	4,05	1,04

Tablo 2’de görüldüğü gibi üniversite öğrencilerinin, Bilgisayar dersine yönelik güdülenmelerinin alt faktörlerinin aritmetik ortalamaları incelendiğinde genel olarak sahip olunan güdülenme düzeyi bakımından orta yüksek bir ortalamaya sahip oldukları görülmektedir. Her bir alt faktörün ortalamasının $X=3,5$ ’den yüksek olması sebebiyle öğrencilerin ilgili derse yönelik güdülenmelerinin orta seviyede olduğu söylenebilir. Tablo 2 incelendiğinde, dersin başlangıcında sınav kaygısının biraz yüksek olduğu ($X=4.57$) fakat dönem sonunda azaldığı ($X=4.05$) fark edilmektedir. Dersle ve sınavla ilgili bir takım deneyimler kazanmak bu yöndeki kaygıyı azaltmış olabilir. Diğer taraftan İçsel Hedef Düzenleme alt faktörünün öntest ortalaması $X=3.74$ iken sontest ortalamasının $x=4.13$ olduğu görülmektedir. Bir başka ifade ile bu dersin alınmış olmasının öğrencilerin İçsel Hedef Düzenlemelerini artırdığı söylenebilir.

Benzer şekilde üniversite öğrencilerinin Görev Değeri, Öğrenmeye İlişkin Kontrol İnancı ve Öğrenme ve Performansla İlgili Öz-Yeterlik alt faktörlerindeki güdülenme düzeylerinde az miktarda da olsa bir artış olduğu tablodan seçilmektedir. En az değişim ise Dışsal Hedef Düzenleme Alt boyutunda gerçekleşmiştir.

Araştırmada öğrencilerin Bilgisayar dersine yönelik güdülenmelerinde meydana gelen değişimin daha net ortaya konulabilmesi amacıyla öntest ve sontest güdülenme düzeyi genel ortalamalarının karşılaştırılması yapılmıştır. Elde edilen veriler Tablo 3'te verilmiştir.

Tablo 3. Güdülenme Düzeylerinin Öntest ve Sontest Ortalamalarının Karşılaştırılması

Güdülenme Düzeyi	N	Ortalama	Standart sapma	t	p
Öntest	53	4,19	,925	32,72	,000
Sontest	53	4,42	,800	39,18	

Tablo 3'e göre üniversite öğrencilerin bilgisayar dersine yönelik sahip oldukları güdülenme düzeylerinin genel ortalamasının öntestte $X=4.16$ ve sontestte $X=4.42$ 'dir. p değerine bakılarak ortalamalar arasındaki bu artış miktarının anlamlı olduğu söylenebilir ($p<.05$).

Çalışmada ayrıca, katılan öğrencilerin bilgisayar dersine yönelik sahip oldukları güdülenmelerinin cinsiyetlerine göre karşılaştırılması yapılmıştır. Yapılan t testi sonucu elde edilen bulgular Tablo 4'te verilmiştir.

Tablo 4. Güdülenme Düzeylerinin Öğrencilerin Cinsiyetine Göre Karşılaştırılması

Cinsiyet	N	Ortalama	Standart sapma	t	p
Erkek	8	4,72	1,037	1,117	,164
Kız	42	4,38	,749	,894	

Çalışmaya katılan öğrencilerin Bilgisayar dersine yönelik sahip oldukları güdülenmelerinin cinsiyete göre yapılan karşılaştırmasında erkek öğrencilerin ($X=4,72$) kız öğrencilere ($X=4,38$) göre daha yüksek bir güdülenmeleri olduğu görülmektedir. Ancak yapılan t testine göre bu fark arasında istatistiksel olarak anlamlı bir fark çıkmamıştır ($p>.05$)

SONUÇ ve ÖNERİLER

Psikolojik Danışmanlık ve Rehberlik Ana Bilim Dalı'nda okuyan üniversite öğrencilerin Bilgisayar dersinin başlangıcında Sınav kaygıları, Dışsal Hedef Düzenlemeleri, Öğrenmeye İlişkin Kontrol İnançları ve Görev değerleri orta yüksek derecededir. Dersin

sonunda ise sınav kaygıları azalmış, Görev Değeri, Öğrenmeye İlişkin Kontrol İnancı ve Öğrenme ve Performansla İlgili Öz-Yeterlikleri ise artmıştır.

Bilgisayar dersinin başlangıcında bitişinde uygulanan öntest ve sontest sonuçlarına göre dersin verilmesi ile derse yönelik güdülenmelerinin genel ortalamasında artış vardır.

Öğrencilerin cinsiyetleri ile Bilgisayar dersine yönelik sahip oldukları güdülenmeleri arasında her ne kadar erkek öğrencilerin güdülenmeleri kız öğrencilerin güdülenmelerine göre biraz daha yüksek çıksa da istatistiksel olarak anlamlı bir farklılık yoktur.

Araştırmada ulaşılan sonuçlar ışığında uygulamaya ve ileride yapılacak araştırmalara ilişkin geliştirilen önerilere aşağıda yer verilmiştir.

- Bu çalışmada sosyal bilimler alanında öğrenim gören öğrencilerin sayısal bir derse yönelik güdülenmelerine bakılmıştır Üniversite öğrencilerinin alacaklara derslere yönelik öğrenme güdülenmelerinin belirlenmesi o derse yönelik önyargıları kırıp öğrencilerin çabasını artırarak başarılı olmalarını sağlayabilir. Bu nedenle farklı branşlarda ders alan öğrencilere yönelik başka çalışmalar yapılabilir.
- Her bir ders için öğrencilerin güdülenmeleri belirlenip düşük veya yüksek olan alt faktörlerdeki düzeyin istenilen yöndeki değişimini sağlamak amacıyla dersin işlenişine eklemeler yapılabilir.
- Bilgisayar gibi teknik bilgiler de içerebilecek olan derslerde kız öğrencilerin de güdülenmelerini artırmak amacıyla birtakım olumlu yönlendirmeler yapılabilir.
- Bu çalışmada, Yıldız Teknik Üniversitesi Eğitim Fakültesi Psikolojik Danışmanlık ve Rehberlik Ana Bilim Dalı'nda okuyan ve Bilgisayar dersini alan öğrenciler üzerinden verilere ulaşılmıştır. Farklı bölümlerdeki öğrencileri de içeren daha kapsamlı çalışmalar yapılabilir.

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Bilimin Merak Uyandırma Serüveni: “Geleceğin Bilim Eğitimcileri için Güncel Bilim ve Bilim Eğitimi” Etkinliği (TÜBİTAK 2229)

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Özet

Bu çalışmanın amacı; Türkiye Bilimsel ve Teknolojik Araştırma Kurumunun (TÜBİTAK 2229) proje desteği kapsamında gerçekleştirilen “Geleceğin Bilim Eğitimcileri İçin Güncel Bilim ve Bilim Eğitimi Projesi” ile ilgili katılımcılar tarafından yapılan değerlendirmeleri ortaya koymaktır. Projede hedeflenen, geleceğin bilim eğitimcilerinin, güncel bilim ve bilim eğitimi uygulamaları ile ilgili bilgi düzeylerini arttırmak, farkındalık ve deneyim kazanmalarını sağlamaktır. Türkiye’de farklı Üniversitelerde ve farklı sınıf düzeylerinde eğitim alan Fen bilgisi öğretmen adaylarının, fizik, kimya, biyoloji alanları ile ilgili en son bilimsel gelişmeler hakkında teorik ve uygulamalı olarak bilgilendirilmelerinin ve böylece fen bilimlerinin içeriği ile ilgili bilim okuryazarlığı becerilerinin artırılmasının amaçlandığı proje ile ilgili veriler, katılımcılara uygulanan standartlaştırılmış açık uçlu görüşme formu ile elde edilmiştir. Elde edilen veriler, nitel veri analizi tekniklerinden betimsel analiz tekniği kullanılarak analiz edilmiştir. Araştırmadan elde edilen bulgulara göre; proje kapsamında verilen eğitimlerle ilgili olarak öğretmen adayları; en güncel bilimsel konulara yönelik merak, bilgi ve motivasyon düzeylerinin arttığını, bakış açılarının genişlediğini ve bilimin günlük yaşamı nasıl etkilediği ile ilgili bilinçlendirildiklerini ifade etmişler, ayrıca, bilimsel bilginin merak ve ilgi uyandıracak şekilde nasıl öğretilmesi gerektiği ile ilgili en son yeniliklerden haberdar olduklarını belirtmişlerdir.

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Keywords: "Bilim Eğitimi, Öğretmen Yetiştirme, Bilimsel Etkinlik"

Abstract

The purpose of this study was to reveal the evaluations made by the participants regarding the “Project of Up-to-date Science and Science Education for Future Science Educators” conducted within the scope of the project support of Turkish Science Academy Institution (TÜBİTAK 2229). The project aimed at increasing the knowledge levels of future science educators regarding the up-to-date science and science education and raising their awareness and experience. In the study, the data were collected via a standardized open-ended interview form applied to the participants regarding the project which aimed at informing pre-service teachers of Science from different class levels at different universities in Turkey practically and theoretically about the recent scientific developments in the fields of physics, chemistry and biology. In this way, the ultimate purpose was to increase their literacy skills in science. The data collected was analyzed with the descriptive analysis technique, which is one of the qualitative data analysis methods. According to the findings obtained in the study, the pre-service teachers reported that regarding the education given within the scope of the project, they increased their levels of motivation and knowledge about up-to-date scientific issues; that they broadened their perspectives; and that they raised their consciousness of the influence of science on daily life. Also, they stated that they were informed about the recent innovations regarding how to teach scientific information in an interesting manner.

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GİRİŞ

21. yüzyılda gençlik, insan toplulukları arasında bulunmaz bir nimet, önemli bir güç ve yararlanılması gereken muazzam bir dinamik olarak görülmektedir. Türkiye’de toplam nüfusunun yaklaşık dörtte birini gençlerin oluşturması; ülkemizin kendi geleceğini istediği gibi şekillendirme olanağına, diğer ülkelere göre daha fazla sahip olduğunun göstergesidir. Toplumun en dinamik bireylerine, doğrudan ya da dolaylı olarak içinde olduğu tüm alanlarda, teori (kuram) ve pratiği (uygulama) bütünleştirerek, yaşama geçirilebilir bilgi, beceri ve tutumları kazandırmak ve böylece toplumumuzda sürekli öğrenme ve gelişimi bir yaşam biçimi hâline getirmek gerekmektedir. Nitelikli genç bireyler yetiştirebilmek ise; “kaliteli eğitim” olgusuyla ilişkili olup, bu tür bir eğitim, klasik okul öğrenmelerinin dışında, farklı ve yeni eğitim yaşantılarıyla gerçekleştirilebilir.

Bu kapsamda Türkiye Bilimsel ve Teknolojik Araştırma Kurumu (TÜBİTAK), “2229 Bilimsel Eğitim Etkinlikleri Destekleme Programı” çerçevesinde çeşitli eğitim ortamlarının hazırlanmasını öngörmüştür. TÜBİTAK; program kapsamındaki bilimsel alanlarda, ortaöğretim öğrencilerine yönelik olimpiyat programlarına katkı sağlayacak öğretmenlerin eğitimine yönelik etkinlikleri, ilköğretim, ortaöğretim, ön lisans, lisans öğrencilerini yine belirtilen bilim alanlarında çalışmalar yapmaya teşvik etmek, çalışmalarını yönlendirmek ve bilimsel gelişmelerine katkıda bulunmak amacıyla düzenlenecek olan etkinlikleri, son olarak; lisansüstü öğrencileri ile genç araştırmacı ve uzmanlara yönelik belirtilen bilimsel alanlarda, yaygın kullanılması beklenen tekniklerin kapsamlı ve gerçekçi biçimde öğretilmesini amaçlayan, değişik üniversitelerden öğretim üyelerinin görev aldığı etkinlikleri desteklemektedir (TÜBİTAK, 2014). TÜBİTAK tarafından desteklenen pek çok eğitim, ilköğretimden lisans üstü alanlara kadar çok sayıda bireyin gelişimine katkı sağlamaktadır. Üniversiteler ve çeşitli sivil toplum örgütleri tarafından planlanan TÜBİTAK destekli yaz doğa eğitimleri, alan gezilerinde öğrencilere uygulama imkânı sağladığı ve disiplinler arası bakış açısını geliştirerek temel kavramlar ve üst düzey öğrenmeler arasında ilişki kurmaya yardımcı olduğu için önemli eğitim etkinlikleridir (Erdoğan, 2011). Etkili için teorik bilginin gerçek yaşamdaki karşılığını görme ve teori ile uygulama arasında köprü kurma niteliğindedir.

TÜBİTAK 2229 proje desteği kapsamında 2013 Haziran ayında gerçekleştirilen “Geleceğin Bilim Eğitimcileri İçin Güncel Bilim ve Bilim Eğitimi Projesi” ile geleceğin bilim eğitimcilerinin, güncel bilim ve bilim eğitimi uygulamaları ile ilgili bilgi düzeylerini arttırmak, farkındalık ve deneyim kazanmalarını sağlamak amaçlanmıştır. Türkiye’de farklı üniversitelerde ve farklı sınıf düzeylerinde eğitim alan Fen bilgisi öğretmen adaylarının, fizik, kimya, biyoloji alanları ile ilgili en son bilimsel gelişmeler (biyoteknoloji, gen teknolojisi, insan genom projesi, nanoteknoloji, radyoaktivite, nükleer enerji, yüksek enerji fiziği, parçacık hızlandırıcılar) hakkında teorik ve uygulamalı olarak bilgilendirilmelerinin ve böylece fen bilimlerinin içeriği ile ilgili bilim okuryazarlığı becerilerinin artırılmasının amaçlandığı Projede en güncel bilimsel konuların yer almasının nedenleri şu şekilde ifade edilebilir: Öncelikle bilim, bireysel ve toplumsal yaşantıda, teknoloji yoluyla büyük yararlar sağlar. Bilimsel olarak üretilen bilgiler, teknoloji sayesinde yaşam kalitemizi artırırken, diğer yandan yanlış kullanımlar ile de sosyal yaşantımızı alt üst edebilir. Bu noktada; toplum bireylerinin, doğru ve gerçek bilgilerle donatılmış bir bilince sahip olması, birçok olumsuzluğa zamanında engel olunabilmesi adına önemlidir. Ayrıca bilimin entelektüel değeri vardır. Yani bilim, insanın bilme isteğini, merakını tatmin eder ve insana evreni anlama olanağı sağlar. Bu sayede, entelektüel bilgi birikimli gençler ile yaşam boyu “öğrenen toplum” olma yolunda önemli bir adım atılmış olur. Son olarak bilimin ahlaki değeri vardır. Bilim insanlara bilimsel bir zihniyet kazandırır. Bilimsel zihniyet ise, insanlara dürüst ve tarafsız olmayı, karşılaşılan problemleri sabırlı, ayrıntılı ve uzak görüşlü bir biçimde ele almayı öğretir ki bunlar ahlak ve erdem en önemli özellikleri arasındadır. Gençler, güncel yaşamı etkileyen alanlardaki bilimsel bilgileri yayarken, ahlak ve erdem sahibi olma özelliklerini de geliştirme şansına sahip olacaklardır. Bu kapsamda çalışmanın amacı; TÜBİTAK 2229 proje desteği kapsamında gerçekleştirilen “Geleceğin Bilim Eğitimcileri İçin Güncel Bilim ve Bilim Eğitimi Projesi” ile ilgili katılımcı değerlendirmelerini, verilen eğitimlerin, bilgilendirme, düşündürme ve yorumlama, görsellik, uygulama, merak ve ilgi uyandırma, motivasyon aşamaları temelinde ortaya koymaktır.

YÖNTEM

Araştırmada nitel araştırma yöntemlerinden görüşme türü ve görüşme türlerinden görüşme formu yaklaşımı kullanılmıştır. “Görüşme formu yöntemi benzer konulara yönelmek yoluyla değişik insanlardan aynı tür bilgilerin alınması amacıyla hazırlanır (Yıldırım ve Şimşek, 2008). Bu çalışmada yapılandırılmış görüşme formu kullanılarak öğretmen adaylarının araştırmanın amacı doğrultusundaki görüşleri tespit edilmiştir.

2.1. Çalışma Grubu

Bu çalışmada, araştırmanın konusunu oluşturan ve TÜBİTAK 2229 proje desteği kapsamında 2013 Haziran ayında gerçekleştirilen “Geleceğin Bilim Eğitimcileri İçin Güncel Bilim ve Bilim Eğitimi Projesi”ne iştirak eden 26 katılımcının görüşleri alınmıştır. Katılımcılar, Bülent Ecevit Üniversitesi, Aksaray Üniversitesi, Dokuz Eylül Üniversitesi, Boğaziçi Üniversitesi, Abant İzzet Baysal Üniversitesi, Gazi Üniversitesi, Balıkesir Üniversitesi Eğitim Fakültelerinde öğrenim gören farklı sınıf düzeylerindeki Fen Bilgisi Öğretmen adaylarından oluşmaktadır.

2.2. Yapılan işlemler

Bu çalışmanın da konusunu oluşturan ve TÜBİTAK 2229 çağrısı kapsamında gerçekleştirilen “Geleceğin Bilim Eğitimcileri İçin Güncel Bilim ve Bilim Eğitimi Projesi” için yapılan ön hazırlık çalışmaları ve uygulama süreci çalışmaları şu şekilde ifade edilebilir: Proje, fen bilgisi lisans öğrencilerine bilimin ve bilim eğitiminin en güncel yönlerini teorik ve uygulamalı olarak tanıtmayı amaçlamaktadır. Bu nedenle alanında önemli bilimsel çalışmalara imza atmış öğretim üyeleri tarafından eğitimlerin verilmesi öngörülmüştür. Projede eğitimci olarak görev alacak öğretim üyeleri belirlendikten ve projenin içeriği ile ilgili çeşitli görüşmeler yapıldıktan sonra Tablo 1. de yer aldığı şekliyle altı günlük eğitimin programlanması yapılmıştır. Eğitimler her gün için 45 dakikalık dersler şeklinde 9 ders ve altı gün boyunca toplam 50 ders olacak şekilde planlanmıştır. Dört derslik süreç ise açılış ve kapanış oturumlarına ayrılmıştır. Proje başvurusu esnasında kurulan web sitesi ile projenin kabul edilme sürecini takiben, proje eğitimlerinden yararlanmak isteyen fen bilgisi lisans öğrencilerinin başvuruları alınmaya başlanmış ve katılımcı listesi oluşturulmuştur. Başvurular alınırken, sitenin ve projenin duyurulması ile ilgili olarak yaygın akademik sitelere ve sosyal paylaşım sitelerine duyuru metinleri bırakılmıştır. Projeye Türkiye’nin farklı şehirlerindeki üniversitelerden öğrenciler başvurmuş ve başvurular arasından en iyi akademik ortalamaya sahip öğrenciler dâhil edilmiştir. Projede katılımcı sayısı 30 olarak belirlenmiş, son başvurulardan sonra birtakım sebeplerle gelemeyenlerden sonra 22 öğrenci ile eğitimler gerçekleştirilmiştir. Proje eğitimlerinin tümü Kdz.Ereğli öğretmenevinde gerçekleşmiş, öğrenciler ve öğretim üyeleri konaklama ve yemek ihtiyaçlarını da bu mekandan karşılamışlardır. Proje eğitimleri, Tablo 1’de de görüldüğü üzere; Biyoloji, Fizik, Kimya, Teknoloji, Bilim Eğitimi ve Bilim ve Teknoloji Eğitimi alanlarında teorik ve uygulamalı olarak planlanmıştır. Uygulamalara öğrencilerin aktif katılımları sağlanmıştır. Eğitimler boyunca öğrenciler sorgulayarak öğrenmeyi tercih etmişler, eğitimcilere çeşitli sorular sorarak onların bilgi ve deneyimlerinden yararlanmışlardır. Ayrıca derslerden sonra arta kalan zamanlarda öğrencilerle sosyal etkinlikler gerçekleştirilmiş, bu kapsamda bisiklet gezisi, tekne turu ve hedef belirleme atölye çalışması düzenlenmiştir.

Tablo 1.Proje kapsamında verilen eğitimlere ait ayrıntılı program

Ders Veren Öğretim Üyesinin Görev Yaptığı Üniversite	Dersin Alanı	Dersin Konusu
Bülent Ecevit Üniversitesi	Kimya	Nanoteknoloji ve polimer kimyasındaki uygulamaları
Bülent Ecevit Üniversitesi	Biyoloji	Biyolojik çeşitlilik ve Türkiye boyutu
Bülent Ecevit Üniversitesi	Bilim Eğitimi	Bilim, bilim eğitimi ve bilimsel yaratıcılık, bilim eğitiminde yaratıcılık uygulamaları
Aksaray Üniversitesi	Bilim Eğitimi	Bilim eğitiminde sürdürülebilir kalkınma bilinci
Abant İzzet Baysal Üniversitesi	Bilim- Teknoloji Eğitimi	Bilim-teknoloji etkileşimi, inovatif (yenilikçi) teknoloji.
Bülent Ecevit Üniversitesi	Fizik	Enerji kaynakları ve Nükleer enerji Nükleer reaktörler
İnönü Üniversitesi	Bilim Eğitimi	Bilimin doğası ve epistemolojik inançlar

Bülent Ecevit Üniversitesi	Bilim Eğitimi	Bilimin doğası - uygulama
Bülent Ecevit Üniversitesi	Teknoloji	Bilimsel proje oluşturma ve proje fikri bulma yaklaşımları
Uludağ Üniversitesi	Fizik	Bilim eğitimi ve etkileşimli bilgisayar yazılımları
Bülent Ecevit Üniversitesi	Biyoloji	Yüksek enerji fiziği ve parçacık hızlandırıcılar
Uludağ Üniversitesi	Fizik	Gen Teknolojisi ve insan genom projesi
		Radyoaktif maddeler ve radyasyon
		Çevresel radyasyon ölçümü

2.3. Veri Toplama araçları

Bu çalışmada öğretmen adaylarının projede verilen eğitimlerle ilgili değerlendirmelerine yönelik görüşlerini belirlemek amacıyla yapılandırılmış görüşme formu kullanılmıştır. Formun kapsam geçerliliği etkinlik düzenleme komitesinde bulunun alan eğitimi uzmanı görüşleri ile sağlanmıştır. Formda katılımcıların öğretim üyeleri tarafından verilen bütün eğitimlerle ilgili görüşlerini, açık uçlu olarak belirtmelerinin istendiği 6 başlık (1.Bilgilendirme, 2.Düşündürme ve yorumlama, 3.Görsellik, 4.Uygulama 5.Merak ve ilgi uyandırma, 6. Motivasyon) bulunmaktadır. Her öğrenci her bir eğitimcinin sunumu için görüş bildirmiştir. 12 eğitim boyunca 22 katılımcı her bir ders için değerlendirme yapmış, toplamda 264 adet görüşme formu kullanmıştır.

2.4. Verilerin Analizi

Araştırmada yapılandırılmış görüşme formu ile toplanan verileri analiz etmek için, nitel veri analizi tekniklerinden içerik analizi kullanılmıştır.

BULGU VE YORUMLAR

Katılımcıların proje kapsamında verilen eğitimler hakkında açık uçlu olarak belirttikleri görüşleri, nitel veri analizi tekniklerinden içerik analizine tabi tutularak, kategorilere göre anahtar kelimelerin tespit edilmesi şeklinde bulgular elde edilmiştir:

Bilgilendirme” kategorisine göre elde edilen bulgular:

Tablo 2: “Bilgilendirme” kategorisine göre elde edilen anahtar kelimeler ve frekans değerleri

Bilgilendirme	Belirtilen anahtar kelimeler	Frekans	Belirtilen anahtar kelimeler	Frekans
İleri düzeyde	Çok iyi(Süper)	38	Dikkat çekici	5
	Yeterli	34	Akıcı	4
	Güncel bilgi	28	Başarılı	4
	Etkili	13	Açık ve net (Anlaşılır)	3
	Konuya giriş iyi	11	Kapsamlı	3
	Gereksiz bilgi yok	11	Güncel teknoloji kullanılmış	1
	Bilinçlendirici	9	Doyurucu	1
	Düşünmeye yöneltici sorular	7	Derin bilgi	1
	Faydalı	7	Vurgulama	1
	Seviyeye uygun	6	Keyifli	1
	Farklı bakış açısı kazandırma	6	Disiplinler arası	1
	İyi organize edilmiş bilgi	5		
Kısmen	Seviyenin üzerinde bilgi	7	Soyut bilgi	1
	Kafa karıştırıcı	1	Orta düzeyde	1
Yetersiz	Yetersiz	3	Sunum şekli	1
	Gereksiz bilgiler(çok fazla)	2		

Tablo 2’ye göre; katılımcılar eğitimlerin “bilgilendirme” aşamasını, yüksek frekans değerleri ile oldukça iyi ve yeterli bulduklarını ifade etmişlerdir. Eğitimlerin güncel bilginin sunulması adına etkili olduğunu belirtmişler ayrıca eğitimcilerin konuya girişlerinin ve gereksiz bilgiye sunumlarda yer vermemelerinin olumlu etkisine

değınmişlerdir. Eğitimlerde sunulan bilgilerin, bilinçlendirici ve faydalı olduđu konusunda aynı fikirde olan katılımcıların yanı sıra, farklı bakış açısı kazandırma adına eğitimlerin faydalı olduğunu öne süren katılımcılar da mevcuttur. Ek olarak, katılımcıların, eğitimciler tarafından bilginin dikkat çekici, akıcı, açık ve net bir şekilde organize edildiğini ve bu yüzden başarılı sunumlar gerçekleştiğini ifade ettikleri söylenebilir. Eğitimlerde verilen bilginin seviyenin üzerinde ve gereksiz (çok fazla) olduğunu düşünen az sayıda katılımcı görüşü de bulunmaktadır.

“Düşündürme ve yorumlama” kategorisine göre elde edilen bulgular:

Tablo 3: “Düşündürme ve yorumlama” kategorisine göre elde edilen anahtar kelimeler ve frekans değerleri

Düşündürme ve yorumlama	Belirtilen anahtar kelimeler	Frekans	Belirtilen anahtar kelimeler	Frekans
İleri düzeyde	Sorularla düşünme	25	Anlam çıkarma	4
	Etkinlikle düşünme	22	Farkındalık yaratma	4
	Etkili	19	Keşfettirici	4
	Farklı bakış açısı kazandırma	16	Geleceği kestirme	4
	Güncel örneklerle yorumlama	15	Bulguların sonuçlarını düşünme	3
	Güncel konu başlıkları	15	Eğlenceli	3
	Verimli	14	Grup çalışması etkili	3
	Üst düzey düşünme	13	İlişkili	2
	Farklı fikirleri keşfetme	11	Kendini geliştirme	2
	Sorgulama	11	Kafa karıştıran, şüpheyi düşüren	2
	Yoruma açık	9	Disiplinler arası düşünme	1
	Orijinal düşünce üretimi	7	Dinamik	1
	Değerlendirme yapma	7	Muhakeme yapma	1
	Sınıf iletişimi iyi	6	İnandırıcı	1
	Anlaşılır	5	Karışıklık giderici	1
Kısmen	--	--	--	--
Yetersiz	Konu ağırlıklı	6	Slayt yoğunluğu	3
	Uygulama ağırlıklı	6	Seviyenin üzerinde bilgi	1
	Anlaşılmama	4	Bildiğim konu	1
	Tek düze düşünme	4		

Tablo 3’e göre eğitimlerin “düşündürme ve yorumlama” yapmayı ne derece sağladığı ile ilgili katılımcı görüşleri, en çok, soru ve etkinliklerin olumlu etkisi üzerine yoğunlaşmaktadır. Ayrıca katılımcılarda düşünme ve yorumlama sürecinin “etkili ve verimli” geçtiği görüşü hâkimdir. Eğitimlerde güncel konu başlıklarının ve güncel örneklerin kullanılmasının, düşünme ve yorumlamayı daha etkili kıldığı, böylece farklı fikirleri keşfetme ve farklı bakış açıları kazanma gibi yeterliliklerin katılımcılarda geliştiği söylenebilir. Aynı zamanda orijinal düşünceler üretmek üst düzey düşünebildiklerini ifade eden katılımcılar, yoruma açık olarak sorgulama ve değerlendirme yapabildiklerini belirtmişlerdir. Eğitimler esnasında sınıf içi iletişimin ve grup çalışmalarının etkili olduğunu öne süren katılımcı görüşleri, kafa karıştıran ve şüpheyi düşüren ancak bir o kadar da eğlenceli bir süreçte düşünme ve yorumlamanın gerçekleştiği düşüncesini akla getirmektedir. Konuların tam olarak anlaşılamaması sebebiyle düşünme ve yorumlamanın sağlanamadığı ya da ders boyunca tek düze düşünmenin gerçekleştiği görüşüne sahip az sayıdaki katılımcı bu durumu, konu ağırlıklı sunumlara ve baştan sona uygulamanın yapıldığı derslere bağlamışlardır.

“Görsellik” kategorisine göre elde edilen bulgular:

Tablo 4: “Görsellik” kategorisine göre elde edilen anahtar kelimeler ve frekans değerleri

Görsellik	Belirtilen anahtar kelimeler	Frekans	Belirtilen anahtar kelimeler	Frekans
İleri düzeyde	Çok iyi	45	Kapsamlı	7
	Dikkat çekici	19	Anlaşılır	4
	Profesyonel	17	Eğlenceli	3
	Farklı	10	Eğiticinin beden dili etkili	3

Kısmen	--	--
Yetersiz	--	--

Tablo 4'e göre katılımcılar eğitimlerin görselliğini büyük oranda ileri düzeyde(çok iyi) bulmuşlardır. Farklı, dikkat çekici ve profesyonelce hazırlanmış sunumların, aynı zamanda kapsamlı ve anlaşılır olduğunu ifade etmişlerdir. Az sayıdaki katılımcı ise, eğitimcilerin etkili beden dili kullanmasının, dersi eğlenceli hale getirmesinin yanı sıra görselliğini de zenginleştirdiğini belirtmiştir.

“Uygulama” kategorisine göre elde edilen bulgular:

Tablo 5: “Uygulama” kategorisine göre elde edilen anahtar kelimeler ve frekans değerleri

Uygulama	Belirtilen anahtar kelimeler	Frekans		
İleri düzeyde	Çok iyi	32	Yorum yapma	2
	Öğretici	23	Eğitici geçmişi etkili	2
	Etkileyici(İlginç)	22	Bilim insanlarına özenme	1
	Farklı	11	Materyaller dikkat çekici	1
	Düşünmeye yol açan	11	İlişkilendirme	1
	Konuyla uyumlu	4	Sorgulama	1
	Kalıcı öğrenme	4	Farkındalık yaratıcı	1
	Üst seviyede	2	Katılım yüksek	1
	Zevkli	2	Bakmak ve görmek arasındaki fark	1
Kısmen	Sorularla sınırlı	2	--	
Yetersiz	Konu gereği uygulama yok	14	--	
	Uygulama yok	6		

Tablo 5'e göre, eğitimlerde uygulama yapılmasını katılımcılar, “çok iyi” olarak değerlendirdiklerini büyük oranda ifade etmişlerdir. Yapılan uygulamaları etkileyici ve öğretici bulduklarını, yüksek frekans değerleri ortaya koymaktadır. Uygulamaların katılımcılar tarafından etkileyici ve öğretici bulunması, farklı ve düşünmeye yol açması etkenlerine bağlı olabilir ki açık uçlu ifadelerinde belirtmişlerdir. Konuyla uyumlu olması, kalıcı öğrenme sağlaması ve aynı zamanda zevkli bir süreç geçirilmesi açısından da katılımcılar uygulamaları değerli bulmuşlardır. Uygulamaları “bakmak ve görmek arasındaki fark” olarak değerlendiren bir katılımcı uygulama sürecinin ne derece etkili olduğunun vurgulanması adına önemli bir noktaya değinmiştir. Bazı derslerde uygulama olmadığını ifade eden katılımcıların genel eğilimi ise, konu gereği uygulama yapılamadığını belirtmeleridir.

“Merak ve ilgi” kategorisine göre elde edilen bulgular:

Tablo 6: “Merak ve ilgi” kategorisine göre elde edilen anahtar kelimeler ve frekans değerleri

Merak ve ilgi uyandırma	Belirtilen anahtar kelimeler	Frekans		
İleri düzeyde	Konu ilginç ve güncel	63	Farkındalık yaratıcı	6
	Çok iyi	49	Düşünme ve sorgulama	4
	Ders boyunca merak ve ilgi	36	Karşılıklı etkileşim	3
	Eğitici faktörü	16	Kalıcı öğrenme	3
	Sorular etkili	15	Görsellerin etkisi	2
	Uygulama etkili	14	Zevkli	1
	Materyaller etkili	11	Farklı bakış açısı kazandırma	1
	Öğretici	9	Yanlış bilgiden vazgeçme	1
	Sunum ilginç	7		
Kısmen	Konu üst seviyede	2	--	
Yetersiz	Sunum etkili değil	10	--	

Tablo 6'ya göre; merak ve ilgi uyandırmayı üst seviyede bulan katılımcılar, bu durumu konuların ilginç ve güncel olmasına bağlamışlardır. Katılımcıların büyük bir çoğunluğu, bu ilgi ve merakın ders boyunca sürdüğünü, bunda eğitici faktörünün, soruların, yapılan uygulamaların ve kullanılan materyallerin etkili olduğunu belirtmişlerdir. Sunumların ilginç ve öğretici olması, merak ve ilginin ders boyunca sürmesini sağlamış ve böylece katılımcılarda farkındalık oluşturma ve sorgulama yapmayı tetiklemiş olabilir. Katılımcıların bir kısmı ise, konular üst seviyede olduğu için merak ve ilginin kısmen sağlandığını ve sunumlar etkili olmadığı için yetersiz kaldığını belirtmişlerdir.

“Motivasyon” kategorisine göre elde edilen bulgular:

Tablo 7: “Motivasyon” kategorisine göre elde edilen anahtar kelimeler ve frekans değerleri

Motivasyon	Belirtilen anahtar kelimeler	Frekans	Belirtilen anahtar kelimeler	Frekans
İleri düzeyde	Çok iyi (Süper)	59	Sorular	3
	Eğitici faktörü	25	Farkındalık yaratıcı	2
	Uygulama etkili	19	Sohbet havasında	2
	Konu ilginç	18	Kalıcı öğrenme	2
	Ders boyunca motivasyon	16	Başarı duygusu	2
	Gelecekte işe yarar(faydalı)	12	Eğlenceli	2
	Katılım	9	Günlük yaşamla ilişkili	1
	Sunum sıra dışı	5	Açık ve anlaşılır	1
	Birçok etkin. bir arada kullanıl.	3	Zaman yönetimi	1
	İlginç örnekler	3		
Kısmen	Sunum tarzı	6	Süre uzun	1
	İletişim az	6	Örnekler benzer	1
Yetersiz	Anlatım tek düze	8	Uygulama yok	1
	Konu seviyenin üstü	2		

Tablo 7'ye göre, katılımcılar motivasyonun çok iyi olduğunu büyük oranda belirtmişlerdir. Bunda eğitici faktörünün etkili olduğunu belirtmeleri, motivasyon ve öğretmen(eğitmen) arasındaki ilişki açısından ilginçtir. Aynı zamanda motivasyonun yüksek olmasında uygulamaların etkili olduğunun belirtilmesi, derslerde uygulama yapılmasının ne derece önemli olduğunun vurgulanması adına önemli bir bulgudur. Konuların ilginç olması ve katılımcıların gelecekte işlerine yarayabilecek yararlı bilgi ediniyor olmaları yine motivasyonu yükselten etkenler arasındadır. Motivasyonun ders boyunca sürdüğünü belirten katılımcılar, sınıf içi katılımın ve sunumların sıra dışı olmasının da motivasyonda etkili olduğunu belirttikleri tespit edilmiştir. Katılımcıların bir kısmı, motivasyonun orta düzeyde olmasını sunumun tarzına ve sınıf içi iletişimin az olmasına bağlamıştır. Anlatımın tek düze olması ve konuların seviyenin üstü bulunması da motivasyonu düşüren sebepler arasında yer almaktadır.

SONUÇ VE ÖNERİLER

TÜBİTAK 2229 proje desteği kapsamında yapılan “Geleceğin Bilim Eğitimcileri İçin Güncel Bilim ve Bilim Eğitimi Projesi” ile ilgili değerlendirmelerin ortaya konması amacıyla gerçekleştirilen bu çalışmada, Fen Bilgisi öğretmen adayı katılımcıların genel anlamda bu etkinlik ile ilgili olumlu görüşe sahip oldukları belirlenmiştir. Etkinlikte gerçekleştirilen eğitimlerin bilgilendirme, düşünme, sorgulama, görsellik, uygulama, merak ve ilgi uyandırma ve motivasyon kategorilerinin tümünü büyük oranda çok başarılı bulan katılımcılar konuların güncel ve ilgi çekici olmasını bundaki en önemli etken olarak değerlendirmişlerdir. Ayrıca ilgi çekici uygulamaların yapılmasını, etkili sorular sorulmasını ve profesyonel sunumların kullanılmasını eğitimlerin kalitesini arttıran ve ders boyunca motivasyon ve ilgiyi en üst seviyede tutan unsurlar arasında göstermişlerdir. Farklı bakış açısı kazanma, üst düzey düşünme, kalıcı öğrenme gibi yeterlilikler de yine katılımcıların büyük oranda değindikleri konulardır. Bununla birlikte eğitimlerde uygulama yapılmaması, aşırı teorik hazırlanmış sunum içerikleri ve konunun seviyenin üstünde algılanması gibi noktalar da katılımcıların bazı eğitimlerden yeterli verimi elde edemedikleri sonucunu ortaya koymaktadır. En ilginç bulgular arasında, katılımcıların eğitici faktörünü ön plana

çıkartmaları gelmektedir. Bazı eğitimcilerin bilgilendirme, düşündürme, uygulama, görsellik kategorilerinin tümünde çok profesyonel bir şekilde eğitim vererek, aynı zamanda sınıf içi iletişimi de çok iyi kullanarak motivasyonu ve ilgiyi en üst seviyeye taşımaları buna sebep olarak gösterilebilir. Eğiticinin ne derece deneyimli olduğu (akademik bilgi ve tecrübesi, eğitmen kimliği), beden dilini ne kadar etkili kullandığı, espriliği kişiliği gibi noktalar katılımcıların belirttiği ilginç bulgulardır.

Bu çalışmadan elde edilen sonuçlara göre; projenin büyük ölçüde amacına ulaşmış olduğu söylenebilir. Geleceğin bilim eğitimcisi olacak öğretmen adaylarına bu tarz eğitimlerin verilmesi, onların, aldıkları lisans eğitiminin yanı sıra, bilgi ve deneyim kazanarak ufuklarını genişletmeleri ve geleceğe dönük büyük fayda sağlamaları açısından önemlidir. Bu sonuç, bilim ve çevre eğitimi üzerine farklı gruplar için düzenlenmiş pek çok araştırma tarafından da desteklenmektedir (Erdoğan, 2011; Balım ve diğ., 2013; Tekbıyık ve diğ., 2013; Oğurlu ve diğ., 2013; Marulcu, Saylan ve Güven, 2014). Gerek TÜBİTAK olsun gerekse diğer kurum ve kuruluşlar tarafından bu tarz eğitimlerin sayısı artırılabilir ve Türkiye geneline yaygınlaştırılabilir. Ancak dikkat etmek gerekir ki; eğitimler düzenlenirken, özellikle konuların güncelliğine, uygulamalara, sorgulamaya, görselliğe, ilişkilendirmelere ve sınıf içi etkileşimlere yer verilmeli ve tabii ki alanında iyi yetişmiş eğitimciler tarafından bu eğitimlerin verilmesi sağlanmalıdır.

Teşekkür: “Geleceğin Bilim Eğitimcileri İçin Güncel Bilim ve Bilim Eğitimi Projesi” TÜBİTAK’ın 2229 programı ile desteklenmiştir.

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Bilinen İlk Bilişsel Psikolog: Ebu Zeyd El- Belhi Örneği

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Abstract

The First Known Cognitive Psychologist: The Case Of Abu Zayd Al-Balkhi

Studies have been done in both traditional and modern sources regarding physical and mental health of human beings because it has long been a field of interest of humanity. Especially in today's rapid life cycle because of modern life, an increase in psychological problems, anomie, the quest for meaning have highlighted the importance of physical and mental health. Today at the point we have reached, we can easily say that there is significant knowledge about physical and mental health in both theoretical and practical areas. The topic is also an important element in the area of Islamic culture of research. However, it is difficult to say that there is enough information on this issue because Islamic traditional sources are not being focused on enough and what Islamic tradition says about the topic is mostly overlooked. However, throughout centuries, Islamic scholars have contributed significantly to human physical and mental health with the inspirations driven from the Holy Qur'an. Nevertheless, it is pleasing to see that recently, there is a growing interest and research in this field. In this paper, Ahmed Abu Zayd al-Balkhi's (849-934) ideas about mental health in his work "Sustenance for Body and Soul" are examined and evaluated in accordance with the findings of modern psychology.

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Peer-review under responsibility of the Sakarya University.

Keywords: Psychology, psychotherapy, tradition, Balkhi, cognitive therapy

Giriş

Ebu Zeyd Ahmed El-Belhi (849–934), bugün Afganistan sınırları içinde yer alan Belh'e bağlı Şamistiyan şehrinde doğmuştur. Kindi'den felsefe, fizik, astronomi, mantık gibi sahalarda ders almıştır. Ayrıca bu alanlarla birlikte tıp, matematik, coğrafya, fıkıh ve kelam alanlarında eserler yazmıştır. Yazarın Türkçeye Muhammet Uysal tarafından "Beden ve Ruh Sağlığı" şeklinde tercümesi yapılan "Masalihu'l Ebdan ve'l Enfüs" eseri bu çalışmalardan biri olup "Beden" ve "Ruh Sağlığı" olmak üzere iki ana başlıktan oluşmaktadır (Belhi, 2012). Kitabın bütününde asıl vurgu, dengeli bir yaşamdır. Belhi, beden ve ruh sağlığı görüşlerini "*Dünyadaki bütün mahlûkat, toprak, hava, su ve ateş'in soğuk, sıcak, kuru ve rutubet özelliklerini taşıyan hıtlardan (hümör) oluşur*" (Belhi, 2012: 13) şeklindeki önermesini dört farklı kişilik tipolojisi üzerine inşa ederek bunlara uygun tedavileri bir anlamda bugün modern psikolojide kullanılan "bireysel farklılıklar" ilkesini gözeterek önerilerde bulunmuştur.

Belhi, ruhsal rahatsızlıkların bedensel olanlardan daha çok olduğunu, bu hastalıklardan etkilenme derecelerinin bireysel farklılıklara bağlı olduğunu, ruhsal ve bedensel rahatsızlıkların birbirilerini etkilediklerini

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aktarmış, "hatta bazen bu ruhi acıların ağır yükü, bedensel hastalıklara sebep olur" ifadesiyle bir bakıma bugün somatoform denilen psikolojik sorunların fizyolojik semptomlara dönüşmesi (Budak, 200: 684) rahatsızlığına değinmiştir. Öte yandan hastalık esnasında dışarıdan psikolojik destekle yetinip pasif kalmanın doğru olmadığı (Belhi, 2012: 155) uyarısını eklemekten durmaz. Kuşkusuz, günümüzde psikolojik destek sağlamada dışarıdan alınan profesyonel destek kadar; hastanın uğraş terapileri gibi yöntemlerle aktifleştirilmesi, problemin üstesinden gelmede önemli bir rol oynar. Dikkat edilirse Belhi, dışarıdan alınacak yardımı belli bir kişi ile sınırlandırmaz, kızgınlık esnasında öğütleriyle kendisini yatıştıracak etrafındaki kimselerden özel bir grup oluşturmayı tavsiye eder. Kuşkusuz grup psikoterapisinde grubun birey üzerinde etkili bir rolü vardır. Örneğin, uyuşturucu kullanımı sorununa sahip bir hastaya bu sorunu daha önce yaşamış ve atlatma başarısı göstermiş diğer hastaların tecrübeleri rehberlik edecek niteliktedir. Grup deneyimi, değişim için mükemmel bir olumlu örnek oluştururken aynı zamanda bireyin kendini güvende hissetmesi, aidiyet duygusunun gelişmesi, düşünme, hissetme ve harekete geçme (Wolberg, 2013: 78-79) gibi davranışların paylaşılması açısından grup uygun bir zemin hazırlar.

Belhi'ye göre psikolojik dünyamıza acı veren rahatsızlıkların temelinde *tasa* yani endişe ve üzüntü yer almaktadır. Endişe ve üzüntü psikolojik problemlerin başlangıcı olmakla birlikte neredeyse bütün ruhsal hastalıkların sebebi, semptomu konumundadır. *Tasa*, psişik dünyamızdaki sorunların en güçlü nedenini oluştururken öte yandan *sevinç* psikolojik iyilik halinin en güçlü sebebinin oluşturmaktadır (Belhi, 2012: 157). Bu girişten sonra yazar, ruh dünyamızda çeşitli sorunlarla ortaya çıkan hastalıkların sınıflandırılmasına yönelir. Belhi'ye göre psikolojik dünyamızı etkileyen belli başlı hastalıklar şunlardır: Öfke, anksiyete, panik atak, depresyon, obsesif- kompulsif bozukluk ve fobiler (Belhi, 2012: 157-159).

1. Öfke Bozukluğu

Yazar ilk hastalık olarak öfke bozukluğunu ele almaktadır. Çünkü ona göre öfke, çokça karşılaştığımız ve insanların başına sıklıkla gelen bir rahatsızlıktır. Özellikle de yöneticilik gibi üst bir konuma sahipseniz ve yönetiminiz altındaki kalabalık bir çalışan topluluğundan sorumlusanız öfke duygusunun sizi sıklıkla yoklaması kaçınılmaz olur (Belhi, 2012: s. 160). Ona göre öfke sıradan bir rahatsızlık olmayıp aksine "insanın sükûnetini bozmak, rengini değiştirmek ve bedeninde düzensiz hareketler meydana getirmek hususunda diğer ruhsal rahatsızlıkların yapamayacağı etkiler yapar, hatta insanı deli suretine sokar. Bazen -öfkeden çılgına döndüğü zaman- bedeni öyle ısıtır ki arkasından kalbi kaplayıp ona hakim olan bir hararet, yani humma hastalığı meydana gelir" (Belhi, 2012: 157). Öfkenin bu etkisi ve gücü nedeniyle kişi kendi içinden (telkinler) yardım almakla yetinmeyip dışarıdan da yardım almalıdır. Hatta bu kişiler sıradan insanlar olmayıp öfkelerini yatıştıracak öğütleriyle rehberlik edecek özel kişiler olmalıdır (Belhi, 2012: 160-161).

Öfke kontrolü yöntemleri olarak şu önerilerde bulunmaktadır; iç denetimi geliştirmek, grupla psikoterapi/rehberlik eğitimine girmek, affetmenin gücünü ve üstünlüğünü anlamak yani farkındalık eğitimi almak, öfkenin sonuçlarını önceden düşünerek otokontrol mekanizmasını geliştirmek, öfke duygusunun öfkelenilen nesne veya kişiden ziyade kişinin kendisine zarar verdiğini düşünmek. Yine öfke esnasında karar almamak öfke nöbeti geçtikten sonra önemli kararları almak, öfke davranışı ve sonrasında ortaya çıkan saldırgan davranışların insanlara hoş karşılanmadığını düşünmek, öfke esnasında karşıımızdaki insanlarda kin ve nefret duygularının uyanmasına neden olduğumuzu düşünmek, aslında öfkelendiğimiz insanların davranışlarının temelinde olumsuz duyguların olmadığını düşünmek. Başka bir deyişle niyet okuyuculuğu yapmaktan kaçınmak, insanlarla ilgili olumlu düşünmenin gücünü kullanmak, öfkelendiğimiz şeylerin çoğunun zaman zaman bizim tarafımızdan da yapıldığını kabullenmek, öfke duyulan kişi ile geçmişte yaşanan olumlu, güzel anıları hatırlamak, öfke duygusunu doğuracak ortam veya kişilerden uzak durmak. Yani (kaçınma davranışı), kendisine kızgınlık duyulan kişinin yanından uzaklaşmak/onu uzaklaştırmak ve cezalandırmak için bir süre beklemek. Başka bir ifadeyle şiddet ve agresyonun kontrol altına alınmasında kullanılan, kişinin odası vb. bir yerde yalnız kalmasını sağlamaya yönelik davranış değiştirme metodu olan mola verme yöntemini (Tekkaş ve Bilgin, 2010: 237) kullanmak (Belhi, 2012: 160-165).

Din Psikolojisi, Psikoloji, Psikolojik Danışmanlık ve Psikiyatri gibi alanlarda çalışan ruh sağlığı profesyonellerinin Belhi'nin yukarıdaki önerilerini bugün de öfke kontrolünde kullandığımızı fark etmeleri zor olmayacaktır. Birkaç örnek vermek gerekirse; Albert Ellis'in akılcı duygusal yaklaşımına göre, öncelikle kişinin öfkeli olduğunu itiraf etmesi, bu duyguyu çoğunlukla kendisinin ortaya çıkardığını kabullenmesi, öfke duygusunun kişiye ve yakın çevresine yarardan çok zarar getirdiğini, kendini merkezde görmekten ve dünyanın kendi etrafında döndüğünü düşünmekten vazgeçmesi, öfke ve şiddetin zararının farkında olunması, herkesin hata

yapabileceğini kabul etmesi ve onlara iyi davranma fırsatı vermesi gerekmektedir (Stevan, Brad, Ellis, 2001: 18,81-83, 207, 235-237). Tavrıs ve Wade (1993) ise öfkenin ateşıyla konuşmaktan kaçınmayı ve sakinleştikten sonra konuşmayı tavsiye etmektedirler (akt. Şahin, 2005: 1-22).

2. Anksiyete Bozuklukları

Yazar, "Korku ve Paniğin Teskin Edilmesi" başlığı altında bugünkü karşılığıyla panik atak, anksiyete, fobiler ve travma sonrası stres bozukluğunu ele almaktadır. Ona göre "*panik korkunun aşırı halidir; çünkü insan her korktuğu şeyden paniklemez, fakat korktuğu şeylerden gördüğü, duyduğu veya düşündüğü bir şey korkusunu daha da artırır onu paniklemeye iter. Üstelik panik ancak yakın bir zamanda olmasını beklediği veya düşündüğü şeylerden olur. İnsan uzun bir müddet sonra olacak şeyleri düşünürse sadece üzülür, fakat nefsi ni meşgul edecek şekilde şiddetli bir korku duymaz... Fakat insanı ölmek ve şiddetli elem gibi yakında başına gelmesini beklediği bir olay gibi hiçbir şey korkutmaz*" (Belhi, 2012: 166-167). Panik Atak belirtilerini bugün de yukarıda Belhinin sıraladığı şekilde tanımlıyoruz (bkz. Tükel, 2002: 7). Bu ifadelerinden de anlaşılacağı üzere Belhi'ye göre Panik Atak, Anksiyete, Fobiler ve Travma Sonrası Stres Bozukluğu gibi korku kökenli psikolojik hastalıkların temelinde ölüm korkusu ve yoğun üzüntü yer almaktadır. Klinik tabloları, görünimleri farklılaşmakla birlikte saydığımız hastalık grubunun tanı ölçütleri içerisinde yoğun endişe, üzüntü, kontrolü kaybetme, ölüm korkusunun (Dilbaz, 1997: 22; Mercier, 2004:134) olduğunu, başka bir deyişle Belhi ile uyuştuğunu belirtebiliriz.

Belhi, "Korku ve Paniğin Teskin Edilmesi" başlığıyla Panik Atak ve Anksiyete arasında bir ayrım yapmaz, ancak konu ilerledikçe aslında panik atağı bugün kullandığımız şekliyle ayrı bir tarif içine yerleştirdiğini görürüz. Öte yandan Anksiyete Bozukluklarının genel bir başlık olduğunu ve panik atak, agorafobi, özgül fobi, obsesif-kompulsif bozukluk, post travmatik stres bozukluğu, akut stres bozukluğu ile yaygın anksiyete bozukluklarını içerdiğini de unutmamak gerekir (DSM-IV: 171-189). Çözüm metodu olarak "*insanın hoşlanılmayan şeylerin olmasını beklemenin bazen onların meydana gelmesinden daha zararlı olduğunu düşünmesidir*" (Belhi, 2012: 167) diyerek günümüzdeki bilişsel süreçlerin yeniden yapılandırılmasına işaret etmektedir. Aynı zamanda bu ifade sosyal bilimlerde sıklıkla kullanılan kendini gerçekleştiren kehanet veya beklenti etkisi kavramı ile eşdeğerdir. (Demirtaş, 2004: 33-53).

Günümüzdeki bilişsel terapilerde ilk hedef olarak hastanın öncelikle kendi düşünce sürecinin farkına varmasını sağlayarak düşüncü şeklini yeniden yapılandırılmasına yardım etmek hedeflenmektedir. Kişinin yanlış düşünceleri veya düşüncelerindeki bozukluklar terapist tarafından vurgu yapılarak fark edilmesi sağlanıp düzeltme yoluna gidilir. Bu süreç hastanın yanlış ve otomatik düşünceleri hakkında daha fazla bilgilenmesi, doğru düşünceyi öğrenmesi ile devam eder (Beck, Emery, 2006: 313). Belhi, sahip olduğumuz korkuların çoğunun zararsız olduğunu ve korkuların büyük çoğunluğunun gerçek olmadığını (Belhi, 2012: 167) bilmemiz gerektiğini söyleyerek bir bakıma bilişsel psikoterapilerdeki irrasyonel, mantıkdışı düşüncelere atıf yapmaktadır. İrrasyonel, mantıkdışı düşünceler; mantıksız düşünce, değerlendirme ve çıkarımların duygu ve davranışları olumsuz bir şekilde etkilemesi şeklinde ifade edilir (Shyh, 2008: 180; George, 2013: 62-74). Bu özellikleri nedeniyle Belhi'yi bilinen ilk bilişsel terapist/psikolog olarak tanımlayabiliriz. Aynı zamanda ruhsal sorunların çözümünde yeri geldiğinde (psikoterapi yetersiz kaldığında) yatıştırıcı ilaçlar almayı tavsiye etmesini de iyi bir medikal ve psikiyatrist olduğu şeklinde tanımlayabiliriz.

3. Depresyon

Yedinci bölümde "Üzüntü ve Hüznün Uzaklaştırılması" adı altında depresyon ele alınıyor. Geleneksel kaynaklarda sıklıkla "bunalım" yerine "hüzün" kavramı kullanılır. Bunalım, derin varoluşsal sıkıntıyı, acıyı, intiharı, insan olmanın getirdiği ağırlığı, karanlığı çağrıştırırken hüznün, daha çok asli vatana duyulan özlem,

ayrılık, tanrıyla bir olma isteminin bir yansıması olarak karşımıza çıkmaktadır. Ancak Belhi hüznü; üzüntünün şiddetli şekli yani bugünkü kullanımıyla bunalım anlamında kullanmıştır. Yazara göre *"Üzüntü ve hüznün, insan kalbine yerleşmeleri halinde insana verdikleri zararlar hususunda ruhsal rahatsızlıklar içerisinde önemli bir yeri var vardır...Üzüntü, insan bedenini bitkin düşürmek, ruhun şehvet güçlerini değiştirmek, onun güzellik ve canlılığını gidermekte en çok olumsuz etki yapan bir problemdir"* (Belhi, 2012: 171). Günümüz DSM-IV tanı kriterlerinde Belhi'nin üzüntü olarak değerlendirdiği depresyonun belirtileri arasında; zevk alamama, yoğun üzüntü, yorgunluk, bitkinlik ve enerji kaybı, tüm etkinliklere karşı ilgi azalması ve zevk kaybı gibi ortak belirtiler yer almaktadır (DSM-IV: 139-141).

Yine ona göre üzüntünün temelinde geçmişte yaşanan olumsuz olaylar yer almaktadır. DSM-IV Tanı Ölçütleri el kitabında bu durum; yas, sevilen birinin kaybı gibi nedenlerden sonra belirgin bir işlev azalması, değersizlik ve intihar düşüncesi, psikotik semptomlar ve psikomotor gerileme belirtileriyle ifade edilmiştir. (DSM-IV: 141). Eğer üzüntüye korku da eşlik ederse ruhsal sorunların en güçlüsü ortaya çıkacak, ikisinin birden bulunmasından dolayı ne hayat zevki ne de sağlıklı bir yaşam kalacaktır. Belhi'ninde ifade ettiği gibi ruhsal bozukluklar bazen bir arada görülebilmektedir. Çoğunlukla depresyona anksiyete, panik atak veya diğer hastalıklar eşlik edebilmektedir. Bunların bir arada görüldüğü klinik hastalıkların tedavisi o oranda zorlaşmaktadır (Oğuz, Hüseyin, 2011: 65). İnsan üzüntü ve korku olumsuzluklarından kurtulmadığı sürece mutlu olamaz. Benzer görüşü günümüzde yoğun olarak kullanılan Psikodinamik psikoterapiler de dile getirmektedir. Psikodinamik psikoterapilerin yoğunlaştığı, şimdiki sorunlarımızın nedeni olarak gördükleri temel etken, geçmiş yaşantılardır. Bu yaşantılar analiz edilip açığa çıkarılmadıkları sürece tedavi gerçekleşmeyecektir (Robert, Stephen, Susan, 2004: 15). Ancak Belhi, dünyada yaşamının gereği olarak hiç kimsenin bu duygulardan tamamiyle uzak duramayacağını, dünyanın tabiatı gereği üzüntü ve korkunun her zaman var olacağını, bu iki faktörün yokluğunun ancak cennet için geçerli olduğunu, çünkü Allahın cennet halkını *"korku ve üzüntünün olmadığı kimseler"* olarak tanımladığını belirtmektedir (Belhi, 2012: 171-172). Esasen bu dini ve felsefi kökenli tartışma karşılığını modern psikoloji ve felsefe ekollerinden biri olan varoluşçuluk akımında da gösterir. Klasik Varoluşçuluk ekolüne göre insan elinde olmadan dünyaya gönderilmiş, atılmış ve her şeye rağmen yaşamak zorunda olan bir varlıktır. Bu nedenle mutlak anlamda mutlu olması mümkün değildir. Çünkü var olmanın kaygısını hep yaşayacaktır (Yalom, 1999: 18-20).

Belhi, bu hastalığa yakalananlarda gözlenen, hayatları hakkında olumsuz düşüncelere sahip, korkulmaması gereken şeylerden korkan, bütün işlerine olumsuz yaklaşan bir özelliğin varlığından söz etmektedir. Bu kişiler *"daha kolay ve umutlu olan yerine hemen, daha korkunç ve daha zor olanı koyar. Başlarına gelen talihsizlikler ve özellikle de bedenlerine isabet eden hastalıklar hakkında düşünceleri olumlu değil olumsuz olur ve en kötüsünü düşünürler. Her şeyde kalplerini daha çok meşgul eden, daha çok sıkıntı veren, sağlık ve selamet düşüncesi ve güzel beklentilerden en uzak şeylere meylederler"* (Belhi, 2012: 181). Belhi'nin bize tarif etmeye çalıştığı şey günümüzdeki bilişsel psikoterapilerde kullanılan bilişsel çarpıtmalar ve düşük öz saygı konularıdır. Depresyonda sıklıkla gözlenen bu tür irrasyonel düşünceler; mantıksız düşünce, değerlendirme ve çıkarımların duygu ve davranışları olumsuz bir şekilde etkilemesi şeklinde ifade edilir (Shyh, 2008: 180; George V., 2013: 62-74). Bu özellikleri nedeniyle Belhi'yi bilinen ilk bilişsel terapist/psikolog olarak tanımlayabiliriz

4. Obsesif-Kompulsif Bozukluk

Kitabın son bölümü "İç Konuşmalar ve Vesveseden Kurtulmak İçin Çareler" başlığıyla Obsesif Kompulsif Bozukluğu ele alıyor. Yazar, vesvesenin ruhi rahatsızlıklar içinde insana en çok acı veren ve aynı zamanda etkisi en güçlü olan rahatsızlık olduğunu vurguluyor. Ona göre vesvese veya bugünkü adıyla Obsesif Kompulsif Bozukluğun oluşumunda sadece ruhsal süreçler değil fakat aynı zamanda bedensel rahatsızlıklar da etkili olmaktadır. Yazarın tartıştığı bir diğer mesele ise hastalığın etiolojisi ile ilgilidir (Belhi, 2012: 176-177). Belhi, Obsesif Kompulsif Bozukluğun kökeninde genetik yatkınlığın rol oynayabileceği gibi çevresel unsurlarında etkili olabileceğini tartışır ki bu tartışma günümüzde konu ile ilgili yapılan çalışmalarında araştırma alanı içerisinde yer almaktadır (Bayraktar, E., 1997: 25-32).

Öte yandan Belhi rahatsızlığın iç konuşma olarak nitelendirilmesinin nedeni olarak insana ruhunun, kalbin vesveseleri olan şeyleri sürekli konuşmaya devam etmesi şeklinde açıklamaktadır. Bu düşünceler bireyin sevdiği şeyler olabileceği gibi korktuğu şeylerle ilgili de olabilmektedir. Özellikle de kalbin bir şeye bağlanması,

çokça arzulanması, aşırı sevme nedeniyle kalbin sürekli onunla meşgul olması ve dolayısıyla başka bir şeyi düşünememe, zevk alamama gibi nedenlerle vesvesenin hasıl olabileceğini aktarmaktadır (Belhi, 2012: 179). Korku kaynaklı vesvesede ise benzerini panik atakta gözlemlediğimiz korktuğu bir şeyin yakın zamanda başına gelebileceği, hayatına, bedenine bir sıkıntının isabet edebileceği düşüncelerinin yol açtığını ileri sürmektedir. Ona göre korku kaynaklı saplantılar sevgi kaynaklı olanlardan daha zordur. Çünkü bu tür saplantıda insan korktuğu şeyi, bunun olması uzakken yakında olacaktı gibi hissedip tepki verir (Belhi, 2012: 180). Bir bakıma Belhi'nin tarif ettiği bu duygu durumu Obsesif Kompulsif Bozukluktan ziyade Anksiyete yani Kaygının tanım alanına girer.

Yazar, vesvese hastalığının tedavisinde dışarıdan alınacak yardım kapsamında kişinin kendisine özel bir dost grubu oluşturmasını, sorunlarını onlarla paylaşmasını ve bu grubun ondaki kötü düşüncelerin gerçek olmadığını, aklına gelen kötü düşünceler olduğunu hatırlatmalarını tavsiye etmektedir. Bireyin kendi içinden alacağı yardımda ise olumsuz düşünceler geldiğinde bunları yatıştırarak alternatif düşünceler üretmesini önerir (Belhi, 2012: 184). Bu öneri bilişsel terapide mantıklı gerekçeler bulma, alternatif düşünceyi geliştirme, olumlu düşünceyi yakalama şeklinde ifadesini bulmaktadır (Leahy L. 2007: 1-32).

Sonuç

Yaklaşık 1100 yıl önce yaşamış olan İslam düşünürü Ebu Zeyd Ahmed el-Belhi'nin ruh sağlığına yönelik yapmış olduğu tespitler ve önerdiği tedavi metotlarının bugün için bile klinik uygulamada yer bulduğu göz önünde bulundurulduğumuzda psikoloji ilmine yapmış olduğu katkı daha anlaşılır hale gelmektedir. Beden ve ruh sağlığını bir bütün halinde ele alması, ruhsal hastalıkların kökeninde zihinsel çarpıtmaların olduğunu belirtmesi, tedavide bilişsel çarpıtmaları tespit edip doğru ve alternatif düşünme şekilleri hakkında bilgi vermesi, grup psikoterapisini önermesi, benlik saygısına vurgu yapması gibi özellikleri onun bilinen ilk bilişsel psikolog olması düşüncemizi haklı çıkaracak niteliktedir. Bu bağlamda geleneksel kaynakları incelemenin, geleneğin bize ne söylediğini belirlemenin ve anlamının önemli olduğu görülmektedir. Ruh sağlığı profesyonelleri için el-Belhi ve görüşlerinin rehberlik yapacak nitelikte olduğu ifade edilebilir.

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Bir Toplumsal İnşa Aracı Olarak Eğitim ve Cumhuriyetin Kuruluş Döneminde Türk Ocaklarının Eğitim Politikası

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Abstract

In this study, the role of the Turkish Hearts for the massification of the republic ideology through the educational activities conducted during the republic period and the function of the educational policy of the government were problematized. Accordingly, first of all the aim of the republican government about the social transformation was considered; secondly, the structure of the Turkish Hearts and its common ideological bond with the government were examined through primary sources. In this study, it was supported through these evaluations that the Turkish Hearts as an educational institution had a determiner and effective role to provide the social transformation of the public and this role has arisen through the educational policy of the government.

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Peer-review under responsibility of the Sakarya University.

Keywords: Civil Society; Turkish Hearts; Kemalism; Official Ideology.

1.Giriş

Tanzimat Dönemi olarak da nitelendirilen 19.yy, Osmanlı İmparatorluğunun karşı karşıya olduğu toplumsal, ekonomik ve siyasal çıkmazların aşılmasına yönelik düşünsel ve kurumsal çabalar çağı olarak okunabilir. İmparatorlukta uzun zaman boyunca hâkim olan üretim formasyonu ve buradan türeyen toplumsal ilişkilerin hem imparatorluk içi hem de evrensel dinamikler doğrultusunda değişime zorlandığı bu dönem, devletin yapısal çözülme ve değişimlerden geçmesi ile sonlanmıştır. 20.yy'ın ilk çeyreğinde ise İmparatorluğun bu bakiyesi üzerinde devlet mekanizmasının kurumsal yapısını yeniden yorumlayan yeni bir rejim deneyimi olarak Cumhuriyet Dönemi başlamıştır.

İmparatorluğun yıkılma tehlikesiyle karşı karşıya olduğu süreçte açığa çıkan ideolojik eğilimlerden Osmanlıcılık ve İslamcılık doktrinlerinin, ulus-devlet inşasına giden tarihsel ve maddi koşullar karşısında yetersiz kalması ile yeni rejim döneminde resmi ideoloji, Cumhuriyetin Kemalist tek parti iktidar dönemine denk düşen bu ilk evrede, geçmiş ile arasına sünger çekmenin aracı olarak toplumu milliyetçi ve garpçı saikler ekseninde yeniden dizayn etme çabasının ürünü olarak biçimlenmiştir. İktidarın bu hedefini hayata geçirebilme sürecinde en önemli rolü oynayan alan ise sahip olduğu işlevsel boyut itibarıyla eğitim politikaları olmuştur.

Bu çalışmada Cumhuriyeti ilan eden iktidar kadrosunun sahip olduğu milliyetçi ve garpçı düşünsel eğilimini, eğitimin araçsallığı üzerinden toplum nezdinde somutlaştırma gayreti, bu gayrette iktidarı tamamlayıcı bir rol üstlenen Türk Ocaklarının eğitsel faaliyetleri bağlamında ele alınacaktır.

2. Cumhuriyet Döneminde Resmi İdeoloji ve Eğitim Politikaları

2.1. Resmi İdeoloji

Cumhuriyet dönemi, İmparatorluk bakiyesi üzerinde yeni bir düşünsel zemin ve kurumsal bütünlük ekseninde açığa çıkmıştır. Bu dönemde devleti ve ona bağlı şekilde toplumu yeniden biçimlendiren süreç, Kemalizm ekseninde inşa olmuştur. Kemalizmin dayanağı ise kendini önceleyen imparatorluk formuna karşı, merkeziyetçi, seküler ve milliyetçi değerler taşıyan modernleşme gayesindeki bir ulus-devlet yaratma eğilimi olarak ifade edilebilir (Yeğen, 2011). Bu eğilimin tezahürü olacak biçimde toplumun cumhuriyeti kuran iktidar tarafından inşa edilişi ise solidarist ve korporatist saikler doğrultusunda; sınıfsız ve imtiyazsız yapısıyla kaynaşmış, kültürel değerler etrafında homojenize hale gelmiş bir halk türetilmesi ile gerçekleştirilmeye çalışılmıştır (Belge, 2011). İktidarın ideolojik yapısı, İttihat ve Terakki geleneğinden gelen pozitivist bir aydınlanma düşüncesi ile Ziya Gökalp tarafından şekillendirilen kültürel milliyetçiliğin uyumlu bir bütünlüğü inancına dayanmaktaydı. Bu görünümüyle Kemalizm, ulus-devlet ekseninde bir modernleşme modeli olarak değerlendirilebilir (Köker, 2011). Kemalizmin modernite algısı mevcut yurttaş yapısını yeniden formüle ederek batıcı ve milliyetçi türdeş bir toplumsal kimlik inşa etme çabası olarak tezahür etmiştir (Çelik, 2011). Kemalist devlet modernleşme doğrultusunda kurumsal yapısını tesis ettikten sonra inşa etmekte olduğu resmi ideoloji ile uyumlu bir yurttaş tipi şekillendirmeye yönelmiştir. Toplumun bu seküler, reformist ve milliyetçi resmi ideoloji ile bütünlük içinde dönüştürülmesi doğrultusunda devletin merkezi bir rol üstlendiği bu yapı, yurttaşlığın yeni formülasyonuna denk düşer (Çelik, 2011). Cumhuriyetin toplumu bu formülasyon bağlamında resmi ideoloji ekseninde, devlet dolayısıyla biçimlendirmesinde temel araçsal rol eğitime verilmiştir.

2.2. Eğitim Politikaları

Cumhuriyet döneminde devletin toplumu dönüştürme ekseninde eğitime biçtiği rol ilk olarak 1921 yılında Mustafa Kemal tarafından Maarif Kongresi'nde ortaya konulmuştur; "Milletlerin sürekli ve müthiş mücadelesi bağımsız ve mutlu kalmak isteyen her millettten, yeni neslin bütün kuvayı ruhiyesine özel bir vasfın zerk edilmesini talep eder. Bu özel vasıf, çocuklarımız ve gençlerimiz yetiştirilirken onlara bilhassa mevcudiyeti ile hakkı ile birliği ile ters düşen bütün yabancı unsurlarla mücadele lüzumunu ve milli düşünceleri kemali istiğrak ile her karşıt fikre karşı şiddetle ve fedakârca savunma zarureti telkin edilmesi yoluyla yaratılır" (Genelkurmay Başkanlığı, 1988). Bu konuşma Mustafa Kemal'in, eğitimi, toplumu milli bir karakter ekseninde kendinden olmayana karşı bir mücadele aracı olarak tasavvur ettiğini ortaya koyması bakımından anlamlıdır. Bu doğrultuda yine Mustafa Kemal tarafından eğitimin usulü ise; "Bilgiyi insan için fazla bir süs, bir tahakküm vasıtası yahut medeni bir zevkten ziyade maddi hayatta muvaffak olmayı temin eden pratik ve kullanılabılır bir cihaz haline

getirmektedir” şeklinde ifade edilmektedir (Genelkurmay Başkanlığı, 1988). Buna göre okullarda resmi ideoloji değerlerinin yanı sıra teorik bilgidен ziyade gündelik hayatta somut karşılığı olan bir içerik ile eğitim verilmesi gerektiği kabul edilmektedir. Öğretmenlerin üzerine düşen sorumluluk da öğrenciyi eleştirel, disiplinsiz bir birey olmaktan uzaklaştırarak memleketin durumu ve çıkarları ile barışık nesiller yetiştirmek olarak belirlenmiştir (Kaplan, 2009). Mustafa Kemal’in eğitime yönelik ortaya konulan yukarıdaki genel yaklaşımları bağlamında, Cumhuriyet Döneminde devletin, resmi ideoloji ekseninde türdeş bir toplum inşa edebilmek için eleştirelliliği dışarıda tutan, yabancı karşıtı, Türk milliyetçisi bir eğitim anlayışı yerleştirmeye çalıştığı savunulabilir. Cumhuriyetin eğitim politikaları döneme hâkim olan bu anlayış ekseninde şekillenmiştir.

Kemalist iktidarın eğitimle ilgili ilk programı 1920 yılında Birinci İcra Vekilleri Heyeti tarafından hazırlanmıştır. Bu programda eğitimin amacı; “çocuklarımıza verilecek terbiyeyi her manasıyla dini ve milli bir hale koymak ve onları cidalı hayatta muvaffak kılacak, istinatgâhlarını kendi nefislerinde bulduracak kudreti teşebbüs ve itimadı nefis gibi seciyeler verecek, müstahsal bir fikir ve şuur uyandıracak bir dereceyi aliyeyle isal eylemek” olarak ifade edilmiştir (Dağlı ve Aktürk, 1988). 1923 yılında hazırlanan Beşinci İcra Heyeti Vekilleri programında ise eğitimin üstlendiği görev alanları; çocukların ve halkın terbiye ve talimi ile milli güzidelerin yetişmesini sağlamak olarak belirlenmiştir (Dağlı ve Aktürk, 1988). Terbiye ve talimin milli hars ve asri medeniyet ekseninde şekillenmesini savunan bu programda eğitimin dini niteliğinin terk edildiği görülmektedir ve bu yönüyle devletin kurumsal yapılanmasının tesisi bağlamında gösterdiği değişim doğrultusunda eğitime biçilen araçsal fonksiyonun niteliği açığa çıkmaktadır (Kaplan, 2009). 1924 yılında ilk, orta ve lise ders programlarında Osmanlı İmparatorluğu ile bağı bulunan içeriklerin müfredattan çıkartılması ve psikoloji, felsefe, fen derslerinin yerine ev idaresi, çocuk bakımı gibi derslerin müfredata girmesi söz konusu olmuştur (Başgöz ve Wilson, 1968). Böylece eğitim içeriğinin ideolojik ve pragmatik boyutu somutlaşmış oluyordu. Aynı yıl içinde mecliste kabul edilen Tevhid-i Tedrisat Kanunu ile de eğitim kurumlarının birleştirilmesi söz konusu olmuştur. Bu kanun ile eğitim Türk vatanına bağlı öğrenciler yetiştirmek üzere düzen ve disiplin içinde tekdüze hale getirilmiştir (Kaplan, 2009). Ayrıca eğitim kurumlarının birleştirilmesi sonucunda medreselerin önce devlet kontrolü altına alınması ve ardından da kapatılması ile eğitimde seküler politikaların uygulanması söz konusu hale gelmiştir. Tevhid-i Tedrisat Kanunu ile din dersinin müfredattan çıkartılmış olmasının bir sonucu olarak cumhuriyetin inşa sürecinde varlığını sürdürmüş olan İslam ile Türklük arasındaki sentezin artık terk edilerek tamamen milli bir eğitim anlayışına geçildiği savunulabilir.

Cumhuriyet Döneminde toplumu millileştirici yaygın eğitime geçilmesi ile yurttaş inşa süreci hızlanmıştır. Bu eğilim doğrultusunda 1926 yılında hazırlanan ilk program olan İlk Mektep Müfredat Programı’nın amacı; “genç nesli muhitine faal bir halde intibak ettirmek suretiyle iyi vatandaşlar yetiştirmek” (Kafadar, 1997). Yurttaşın inşası bağlamında temeli bu şekilde atılan eğitim politikaları Tek Parti iktidarının ilerleyen yıllarında da otoriter bir eğitim sistemi benimseyerek, öğrencinin resmi ideoloji ve onun şekillendirdiği yurttaş kimliğini içselleştirmesini hedeflemiştir (Kaplan, 2009). Çocuk ve gençlerin yaşanmakta olan toplumsal dönüşüme intibak ettirilme çabası bu dönemdeki eğitim politikalarının ana gayesi olarak öne çıkmaktadır (Üstel, 2009).

1930'lı yıllara gelindiğinde iktidar partisinin eğitim politikası; “Kuvvetli cumhuriyetçi, milliyetçi ve laik vatandaş yetiştirmek tahsilin her derecesi için mecburi ihtimam noktasıdır. Türk milletine, Türkiye Büyük Millet Meclisine ve Türkiye Devletine hürmet etmek ve ettirmek hassası bir vazife olarak telkin olunur” şeklinde ortaya çıkmıştır (Parla, 2008). Aynı dönemde Maarif Vekâlet’ince hazırlanmış bir talimata göre ise eğitimin; “Türk mektebi, eline teslim edilmiş her çocuğunu Cumhuriyet’in rejiminin psikolojisi ve ideolojisini tamamıyla kavramış, Türk milleti ve Türkiye Cumhuriyeti için azami derecede faideli bir Türk vatandaşı haline getirmeye mecbur” olduğu ifade edilmektedir (Yücel, 1994). Parti ile devlet arasında bütünselliğin kurumsallaştığı 30’lu yılların başında bu görünümüyle eğitim, resmi ideolojiyi benimsemiş, iktidar partisinin değerleri ile uyumlu ve devlete karşı itaatkâr bireyler yetiştirme görevini üstlenmiş gözükmektedir.

İktidarın ulus-devlet sürecinde toplumsal dönüşümün inşası bağlamında eğitime yüklediği işlev, ilkokuldan üniversiteye, köyden şehre tüm ülke genelinde merkezi biçimde uygulama alanı bulmuştur. Bu doğrultuda üniversitenin ideolojik işlevi için 1933 yılında gerçekleştirilen üniversite reformu örnek verilebilir. Dönemin milli eğitim bakanı olan ve üniversite reformu olarak anılan sürecin önemli aktörlerinin başında gelen Dr. Reşit Galip Darülfünundan üniversiteye yapılan geçişi; “Yeni üniversitelerin en esaslı niteliği, milliliği ve inkılapçılığıdır. Milli tarih için yeni bölümler kurulmuştur. Türk inkılabının ideolojisini üniversite yapacaktır” sözleriyle ifade ederek Cumhuriyet rejiminin üniversiteye biçtiği rolü ortaya koymaktadır (Binbaşıoğlu, 1995). Cumhuriyetin ilanını takip eden ilk yıllardan itibaren okul müfredatı bakımından farklı uygulamalar görülen köylere yönelik devletin kurumsal eğitim politikası ise “köy enstitüleri” ile olmuştur. 1940 yılında meclisten geçen kanunla kurulan köy enstitüleri; öğrencileri cumhuriyetçi ve milli duygularla yetiştirme, milli emellerin köylerde gerçekleştirilebilmesi ve buralarda görev yapacak öğretmenlerin solidarist bir anlayışa dayalı olarak tüm Türk milletinin sınıfsız şekilde kaynaşması için çalışmasını öngören bir doğrultuda kurulmuştur (Kaplan, 2009). Böylece Tek Parti iktidarı döneminde Türkiye genelinde eğitim politikası, resmi ideoloji doğrultusunda, devletin kendine yüklediği ödev ve sorumlulukların bilincine varan milliyetçi çocuk ve gençler yetiştirmeyi hedeflemiştir. Batıcılık ve milliyetçilik sentezi eksenindeki ulus-devletin inşasında toplumsal dönüşüm, devlet tarafından yaratılan ideal yurttaş tipinin okullarda üretilmesi ile gerçekleştirilmeye çalışılmıştır. Böylelikle toplumun resmi ideoloji ile bütünleştirilmesi süreci, eğitim çağındaki bireyler üzerinde doğrudan devletin eğitim politikaları ile şekillenirken, eğitim çağını geçmiş olan kitlelerin cumhuriyet ve onun inkılâpları ile entegrasyonu ise devlet aygıtlarının yanı sıra iktidarı tamamlayıcı oluşumların devreye girdiği bir dolayım sistemi üzerinden gerçekleştirilmiştir. Cumhuriyet döneminde Türk Ocaklarının eğitim politikaları bağlamında üstlendiği rol, bu dolayım sürecinin merkezinde okul çağını geçmiş bireylerin ideal yurttaş olarak yeniden üretilmesi sürecinde açığa çıkmıştır. Çalışmanın ikinci bölümünde Türk Ocaklarının toplumsal inşa paralelinde benimsediği eğitim politikaları incelenecektir.

3. Türk Ocaklarının Eğitim Politikaları

3.1. Türk Ocaklarının Kuruluşu

Türk Ocakları, II. Meşrutiyet'in İttihat ve Terakki iktidarının siyasal istikrarsızlığı içinde, Osmanlıcılığın halkları bir arada tutmaya yetmediğinin anlaşılmasına başladığı bir dönemde, imparatorlukta açığa çıkan diğer milliyetçi hareketlere karşı bir tepki ve kendi milli bilincini tesis etme boyutları ekseninde ortaya çıkmış bir cemiyettir. II. Meşrutiyet Döneminde milli cemiyetlerin çoktan kurulmaya başladığı bir süreçte Türkçülük ekseninde örgütlenmelerin geç bir zamanlamayla ortaya çıkması, Türk anasır içinde millet anlayışının dinsel vurgusunun ağır basmasından kaynaklanıyordu. Bu dönemde Türkçü faaliyetlerin resmi ideoloji ile paralellik içinde yekpare bir teşkilatlanma üzerinden örgütsel görünüm kazanması, 1912 yılında kurulan Türk Ocakları ile gerçekleşmiştir.

Türk Ocakları, Türkçü aydınların destek ve yönetiminde kurumsal yapısını şekillendirmiştir. Ocağın 1913 yılı itibarıyla mevcut yönetim kadrosunu oluşturan isimlerin çoğunluğunun üniversite hocası, öğretmen ve doktor ağırlıklı olduğu Türk Yurdu dergisinde verilen listeden anlaşılmaktadır (Türk Yurdu, 1913). Bu ilk dönem faaliyetleri de, eğitimi ağırlıklı kadronun Osmanlıcılık ve İslamcılıkla uyuşan bir hatta kültürel milliyetçiliği yaygınlaştırmasına yöneliktir. Ocağın ilk nizamnamesinde Türklerin ilmi, toplumsal ve ekonomik seviyesini yükseltmek ve Türk ırkının yetkinliğini arttırmak temel amaç olarak ortaya konulmuştu. Nizamnamenin takip eden maddesinde bu amaca hangi yollardan erişileceği işaret ediliyor, Türk Ocağı adlı kulüplerin açılacağı ve bu kulüplerde ders, konferans, müsamere düzenlenip, kitap ve risaleler yayınlanması hedefleniyordu (Türk Ocağı Nizamname-i Esas ve Dâhilîsi, 1328). Böylece kuruluş döneminde Türk Ocakları, Osmanlıcılık ve İslamcılık sentezini içeren yaklaşım ışığında milliyetçi söylem üzerinden toplumda milli bir bilinç tesis etme gayesiyle faaliyetler sürdürmüştür. İlk dönem faaliyetleri, Osmanlıcılık ve İslamcılıkla uyuşan bir hatta kültürel milliyetçiliği yaygınlaştırarak Türkçülüğün kitlelere ulaştırılması ve böylelikle milli bir bilincin gelişimini hedeflemekteydi.

3.2. Cumhuriyet Dönemi Türk Ocakları

Cumhuriyetin ilanını takip eden süreçte devletin kurumsal yapısındaki değişimle paralel olarak Türk Ocakları da yapısal bir değişimden geçmiştir. II. Meşrutiyet Döneminde kültür cemiyeti niteliğiyle kurulan Türk Ocakları, Cumhuriyet Döneminde inkılapçı, halkçı, hürriyetçi ve irtica düşmanı bir kurum olarak kendini tanımlamaktaydı (Sarınay, 2005). Bu süreçte Türk Ocakları iktidarın sivil alandaki temsilcisi ve halk karşısında da tamamlayıcısı bir örgütlenme halini almıştır. Türk Ocakları başkanı Hamdullah Suphi, 1923 yılında Ankara Ocağı açılışında; "Türk Ocağı, Türk milletin zaferinde neşrettiği fikirlerin tesirini, Türk inkılabında, milliyet inkılabında milliyet fikrine göre terbiye ettiği gençliğin rüştünü, şuurunu görüyor. Türk Ocakları maddi vatanın olduğu kadar, manevi vatanın da bekçisidir" şeklinde konuşarak Ocaklara yeni rejim ve onun politikalarının koruyucusu rolünü yükleyen bu yaklaşımı gözler önüne sermektedir (Hacaloğlu vd., 1998). İktidarın Cemiyete yaklaşımı da bu misyonu onaylar ve meşrulaştırır bir görünümdeydi. Bu doğrultuda Mustafa Kemal 1924 yılında yeni Türk devletinin kuruluşunda en çok Türk Ocaklarına güvendiklerini belirtir (Hacaloğlu, vd., 1998). Bu yaklaşımı tasdikleyen bir görüş de İsmet Paşa'ya aittir; "Türk Ocakları Türk vatanında medeni ve harsi davalarımızın

müessilidirler ve bugün icrayı hükümet eden kuvvet Türk Ocağının mefkûrelerinden ibarettir” (Hacaloğlu, vd., 1998). 1925 yılında düzenlenen Ocakların ikinci kurultayında söz alan Mustafa Kemal burada Cumhuriyet Dönemi inkılaplarının Türk Ocaklarına dayandığını ifade ederek, Ocaklarla iktidar arasındaki bütünlüğü vurgular (Karaer, 1992). Bu bütünlük doğrultusunda Türk Ocakları Aralık 1924’de Bakanlar Kurulu tarafından kabul edilen kararname ile kamu yararına çalışan dernek statüsüne alınmıştır. Böylelikle Cumhuriyet Döneminde Türk Ocakları yeniden faaliyete geçerken Cemiyetin, öncelikle bizzat Mustafa Kemal tarafından desteklendiği ve zamanla bu desteğin resmi bir boyuta ulaşarak Ocakların mali gücünün devlet güvencesi altına alındığı söylenebilir.

Tek Parti iktidarı ile Türk Ocakları arasında ideolojik, etnik ve kültürel ortaklık bulunduğu gibi her iki oluşumun kadrosu da organik bir bağ taşımaktadır. Bu bağa, 1924 yılında gerçekleştirilen Türk Ocakları Kongresine katılan 64 delegeden 42sinin aynı zamanda Halk Fırkasının vekili olması örnek olarak gösterilebilir (Hacaloğlu ve Uzun, 1994). Cemiyetin devlet kaynaklarından desteklenerek devlet politikalarını halka yaygınlaştırma görevi üstlenmesi ile zamanla Türk Ocakları Halk Fırkasının hars şubesi haline gelmiştir (Üstel, 1997). Cemiyetin rejimin bekçisi olarak konumlanışının tarihsel gelişimi ve Cumhuriyet Döneminde Türk Ocaklarında görülen yapısal değişim bu eksenle değerlendirilebilir.

Tek Parti iktidarının güttüğü resmi ideolojinin halka yaygınlaştırılması emelinin Türk Ocakları tarafından bir görev bilinci şeklinde sahiplenilmesi, cemiyeti, ulus-devletin inşasında toplumsal bellek ve yurttaş kimliğinin yeniden üretimini sağlamaya ve böylece ulus-devletin gereği olarak görülen homojen milli bir kitle oluşturmaya yöneltmiştir. İktidarın da modernleşme hedefini milli bir halkın varlığı ile gerçekleştirebileceğine olan inancı dolayısıyla Cumhuriyet Döneminde Türk Ocakları resmi ideoloji bağlamında halkı dönüştürme gayesiyle hareket eden bir cemiyet olarak varlığını sürdürmüştür. Cemiyetin bu dönemdeki faaliyetleri, kurulan yeni devlet ve onun ideolojisine uygun yeni bir millet yaratılmasına yönelik çalışmalardan oluşmuştur.

3.3. Türk Ocakları ve Eğitim Politikaları

Milli Mücadele Döneminin ardından faaliyetlerine 1922 yılı sonunda tekrar başlayan Türk Ocakları, örgütlenme hareketlerinin baskı altında tutularak günden güne eridiği Tek Parti Döneminde üye ve şube sayısını düzenli olarak arttırmıştır. Buna göre 1924 yılında 112 olan şube sayısı, 1925’de 135, 1926’da 237, 1927’de 257 ve 1931’de 267’dir. 1926’da 30.000’i bulmuş ve Ocaklar kapatılmadan evvel 32.000’e ulaşmıştır (Hacaloğlu vd., 1998). Tek Parti iktidarının desteği ile ülke genelinde hızla yayılan Ocaklar, 1924 yılında gerçekleştirilen kurultay doğrultusunda, ülke içinde Türk kültürünün hâkimiyetinin tesis edilebilmesi için bilim ve sanat alanlarını temel faaliyet sahaları olarak belirlemiştir (Hacaloğlu vd., 1998). Zira Hamdullah Suphi’ye göre; bir medeniyetten diğerine geçilen bu dönemde Ocağın vazifesi Türk milletine yol göstermektir (Hacaloğlu vd., 1998). Bu yol gösterme hedefi doğrultusunda Ocak şubelerinde düzenli olarak kurs, konferans ve sergiler organize edilmiştir. Resmi ideolojinin halka ulaştırılması bağlamında kültürel ve eğitsel içerikli bir çalışma anlayışı geliştiren Ocakların bu yapısına, halka verilen dersler örnek gösterilebilir. Bu doğrultuda 1924 yılında Ayvalık’ta açılan

gece derslerinde; ticari, zirai, fenni, sınai, hukuki, medeni malumat, elektrik ve musiki, Bursa Ocağı gece mektebi derslerinde ise; elifba, kıraat, imla, tahrir, hesap, malumat, medeniyet, vataniye, Türk tarih ve coğrafyası okutuluyordu (Türk Yurdu, Aralık 1924).

Bir sonraki yıl faaliyetlerine bakıldığında 1925 yılında Ocakların Ankara şubesinde verilen konferansların başlıkları Cemiyetin üzerinde yoğunlaştığı konular ve bu konulara yaklaşımını örneklemek açısından anlamlıdır. Bu bağlamda, “Medeniyetler Arasında Mücadele ve Garpcılık”, “Milli Tarih Hakkında Tetkikat”, “Anadolu’da Mezhepler”, “Demokraside Kadın”, “Halk Üzerinde Tetkik Usulleri” ve “Türk Tarihinin İlhamları, Türklükte Vahdet, Türk Kahramanları ve Hanedanları” başlıklı konferanslar sayılabilir (Türk Yurdu, Mayıs 1925). Yine etkinliğin başlığı dikkate alınarak Cemiyetin faaliyet yapısıyla ilgili sonuç çıkarılabilecek bir durum, Ağustos 1925’te Bayramiç Ocağında oynanan “Cehaletten Cumhuriyete” adlı tiyatro oyunudur (Türk Yurdu, Aralık 1925). Resmi ideoloji tarafından Cumhuriyet Döneminin halk yığınları için keskin bir aydınlanma çağı olarak okunduğu ve bu algının yaygınlaşması gerektiği bu tiyatro oyunu ile de ortaya çıkmaktadır. 1925 yılının faaliyet raporlarına göre Trabzon Türk Ocağı hars işleri başlığı altında; bölgede Rumca konuşulmamasının Kaymakamlıklara emredildiği, kentin Rus istilasından kalma yabancı isimlerinin temizlendiği, Rumca ismi olan belediye, köy ve sokaklara Türkçe isimler bulunmakta olduğu ve Rumcanın konuşulmaması için öğretmenlerin bilgilendirildiği belirtilmektedir (Türk Yurdu, Şubat 1926). Aynı dönemde Samsun Ocağı, bölgedeki Muallimler ve Tabipler Birliği şubesini bünyesine katmıştır (Türk Yurdu, Şubat 1926).

Nisan 1926’da Mustafa Kemal Ocaklılara hitaben; “Biz doğrudan doğruya milliyetperveriz ve Türk milliyetçisiyiz. Cumhuriyetimizin mesnedi Türk camiasıdır. Bu camianın efradı ne kadar Türk harsıyla meşbu olursa, o camiaya istinat eden Cumhuriyet de kuvvetli olur...” sözleriyle Ocaklıların halkı Türkleştirmeye yönelik faaliyetlerde bulunmasını, onlardan beklediğini göstermektedir (Hacaloğlu vd., 1998). Türk Ocaklarının Tek Parti Dönemi faaliyetleri incelendiğinde inkılapların, halka yaygınlaştırılmasının yanı sıra, genişletilmesine yönelik çalışmalar yürütüldüğü de söylenebilir. Bu doğrultuda 1926 yılında Ağaoğlu Ahmet’in Türkçe ibadet fikrini ortaya atması ve Köprülüzade Fuat’ın belli düzenlemeler yapılarak Latin alfabesine geçilebileceğini tartışması Ocaklılar tarafından inkılapların derinleştirilmeye çalışıldığını göstermektedir (Türk Yurdu, Aralık 1926).

Teşkilatın merkez heyet raporuna göre 1927 yılı içinde sürdürülen faaliyetler, şubelerde sinema ve tiyatro gösterilerinin yapılması, maddi durumu iyi olmayan öğrencilere burs verilerek eğitimlerini sürdürmelerinin sağlanması, sıhhi, iktisadi ve harsi konularda konferanslar düzenlenmesi, Ocaklarda musiki, meslek ve yabancı dil ağırlıklı derslerin verilmesi şeklindedir (Türk Yurdu, Nisan 1928).

1928 yılı Ocak faaliyetlerine bakıldığında, iktidarın inkılaplarının topluma benimsetilmesi yönünde çalışmalar öne çıkmaktadır. Bu doğrultuda Temmuz 1928’de Ocak Merkez Heyetinin şubelere yönelik olarak yayınladığı tamim ile Mecliste kabul edilen beynelmilel rakamların halka öğretilmesi için derhal faaliyete geçilmesi bildiriliyordu (Türk Yurdu, Temmuz 1928). Ağustos ayında ise bu kez de yeni alfabenin halka öğretilmesi için bir tamim yayınlanıyor ve alfabenin halk tarafından öğrenilmesinin Ocaklar için bir mefkûre olduğu vurgulanarak, Ocaklarda bir alfabe seferberliği olması gerektiği belirtiliyor ve aynı ay içinde birçok Ocak

şubesinde yeni harflerin öğretilmesi için dershaneler açılmaya başlıyordu (Türk Yurdu, Nisan 1928). Ocakta düzenlenen konferanslar da inkılapların yaygınlaşabilmesi amacıyla ağırlıklı olarak dil meselesi üzerinde duran içeriklere sahipti. 1929 yılında ise merkez heyetin raporlarına göre Ocakların çalışmaları ilk olarak yeni harflerin kabulü dolayısıyla bütün Ocakların halkı okutmak için gösterdikleri gayret, kabul ettikleri vazifeler ve ikinci faaliyet alanı olarak da yerli mallarının inkişafı için yürütülen çalışmalar şeklinde iki sahada yoğunlaşmaktadır, bunun yanı sıra doğuda açılmakta olan şubelere maddi ve manevi yardımlar sürdürülürken, kimsesiz çocukların eğitim alabilmeleri için çalışmalar da yürütülmüştür (Türk Yurdu, Haziran 1929). Ocaklarda 1930 yılının faaliyetleri inkılaplar, milli sermaye hedefi ve Türkçülük mefkûresi ile ilgili konferanslar ile dil ve meslek dersleri üzerinde yoğunlaşmıştır. Türk Ocaklarının kapatılmasından önceki son merkez heyet raporunda ilim ve sanat heyetinin faaliyetleri; “Bilhassa milli şuurun ve inkılâp ve cumhuriyet mevhumlarının gençlik ve halk arasında tamim ve takviyesi hususunda tevessül olunacak çarelerin taharri ve tetkikatına tahsis etmiş ve inkılâbımızın ideolojisini tespiti hasrı mesai eylemiştir” şeklinde ifade edilerek, Ocakların inkılâplar ve onların üzerinde şekillendiği düşünsel zeminin, halk arasında yayılmasına yönelik çalışmalar sürdürmeye devam ettiği vurgulanmıştır (Türk Yurdu, Mart 1931).

4. Sonuç

Türkiye’de Cumhuriyetin ilanı, iktidar ve rejimin değişmesinin yanı sıra ve ötesinde bir medeniyet projesi olarak halkın dönüştürülmesi ile yeni bir yurttaş tipi yaratılmasının başlangıcı olarak değerlendirilebilir. Geçmiş imparatorluk bakiyesinden sıyrılarak, ulus-devlet sürecinde batıcı ve milliyetçi bir toplum inşa etme hedefi doğrultusunda şekillenen bu projenin temel uygulanma sahası, sahip olduğu araçsal işlev dolayısıyla eğitim olmuştur. Cumhuriyet Döneminin eğitim politikalarının ana amacı, iktidarın tesis ettiği resmi ideolojiyi kitlelere yaygınlaştırarak idealize edilen yurttaş tipine uygun şekilde toplumsal dönüşümü sağlamaktır. Eğitim çağındaki çocuk ve gençleri kapsayan bu politikaların tüm halkı kuşatabilmesi noktasında, bu dönemde iktidarı tamamlayıcı bir nitelikte kurumsal yapısını belirleyen Türk Ocakları devreye girmiştir. Cemiyet bu dönemde, okul sıralarında devlet tarafından yeknesak şekilde ideolojik bir eğitimden geçen çocukların yanı sıra yetişkinlere yönelik benzer bir okul işleviyle donatılmış olarak faaliyetlerde bulunmuş ve resmi ideolojinin toplumca benimsenmesi için uğraş vermiştir.

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Body in education: Terzi method

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Abstract

In line with the most recent discoveries in neuroscience, the combination of mind-body becomes more and more important, thanks also to the studies about Embodied Cognitive Science.

The Embodied Cognition assumes that cognitive development depends on having a "competent" body from the motor and perceptive - perspective (Caruana F., Borghi A.M. 2013).

Terzi Method or method of spatio-temporal organization is developed on this principle (Terzi I., 1995), through a cognitive - motor intervention, gets the information coming from the body in motion, supporting the construction of representations and mental - spatial images (Risoli A., Capettini M., Arosio Elena, Incorpora C., Corbella E. 2010).

The following work is born from the desire to make a critical analysis of the Terzi method, which it will give me the opportunity to analyze the strengths / weaknesses and the links relationships between the Terzi Method and motor skills (Gherardini P., Lastella A., Tagliani N. 2012).

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Peer-review under responsibility of the Sakarya University.

Keywords: Embodied Cognitive Science; Spatio – temporal organization; Mental – spatial images

1. Introduction

The method Terzi Temporal Space was born around 1940 to help blind people to build the meaning and the concept of space, using controlled activities of walking.

Then the creator expanded his research on other diseases (no blind people with mental illness, people with visual and auditory sensory pathology) and able-bodied people in the different orders of compulsory education to promote physical and psychological development.

Through the taxonomy of specific sense-motor exercises that can be adapted to the different needs and the ages of subjects, this method develops the ability to integrate information concerning space and time which come to the central nervous system from the different channels of perception (proprioception - motor, tactile, vestibular, auditory and visual).

It's a motor- cognitive methodology based on the information that come from the body in motion, facilitating the integration of multi-sensory data and the construction of proprioceptive, motor and visual - spatial mental images.

It also promotes the development of analogical spatial thinking , then integrating it with logical verbal thinking.(Terzi I. 1995).

For its characteristics, the Terzi method is considered a methodology in which the experiences drawn from the body in motion and the relations with the environment play an essential role in the development of mind and learning, and cognitive development.

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This method was born in a period during which there was a very strong interest for childhood development concerning to the relationship between mind and body. In fact the Terzi method focuses on the relationship between perception, action and cognition because movement, body and its relationship with the environment are used to get off mental activity.

Ida Terzi, in fact, stated: "... the whole body activity, integrated with the different perceptions of the environment reaches the wonderful result of situating ourselves emotionally in a time and in a rational space ..." (Terzi I. 1995).

This idea is supported by the researches of recent years based on the theory of the Embodied Cognition.

Through the exercises proposed by the Terzi method, it has supported the concept of Embodied Cognition, underling how cognitive development is strongly linked to the perception of body and the development of motor functions (Borghi A.M., Iachini T., 2002).

2. Objective

The objective of this work is to demonstrate how the method of organization of space and time, detects the information coming from body in movement, favoring the construction of representations and mental images and spatial, through a cognitive-motor intervention.

3. Method

The method used in the present study is the analysis and evaluation of a situation, of an instrument or of a recognized method.

This method includes the processes of reflection with the intent to make a solid judgment.

The critical analysis should be considered as a questioning reality and define it according to what you see, not according to what is being said.

This analysis will give me the opportunity to critically analyze the strengths / weaknesses and the links between the method or third parties and motor skills.

4. Results

People use mental representations, both spatial and temporal, in all times and in all activities of daily living, organizing perception and action in a space very articulate, such as personal and extra personal.

Ida Terzi argued that, walking man has "at your legs and feet" natural feet through which he can build a rational space that represents the environment This is the same for volume: manipulating objects, we have continuously "flow of arms and hands" our natural unit of measurement of volume, through which we can rationally know the real volume and the real form of the objects.

Purpose of the Terzi Method is to facilitate the processes of analysis, learning and cognitive development, stimulating the representative activity, through the processing of the data in space and time, using sensory channels, but especially extra visual channels.

According to Terzi there is a close relationship between muscle activities generated by the movement of body and those that are carried through the sensory channels.

In fact, the Terzi Method uses body movement to create a correct mental representation of body's actions, using the information coming from the space in which a person moves along and improving the representation of space and time.

The method also activates processes of metacognition as awareness, control and planning of motor functions through: the development of the capacity to represent the action and / or the sequence of actions (planning); the ability to sequence the actions in a space and in a time and / or the coordination of a series of movements (programming); the organization and execution of the motor project with the analysis of its components; representation and check of results achieved through control processes; working memory and selective attention (Gherardini P., Lastella A., Tagliani N., 2013).

Ida Terzi noted that there are important differences in the organization of space and time, but there are just different times of maturation.

The gait is a significant element for the construction of space because it assumes the function of "perceptual channel"; the lower limbs are not simply a means of locomotion, but the instrument through which the sensory data coming to consciousness and they are integrated and processed (Terzi I, 1983).

The Terzi Method is made up of many exercises that are performed during the various sessions; these exercises provide the movement and require the use of cognitive functions such as attention and memory.

The exercises promote the spatial organization using spatial sequences ordered in both space and staff (body posture and grip) and extra staff (graphic space); and the organization of temporal synchrony, duration and rhythm.

An important aspect of this method is the organization of the exercises in three specific phases:

- *Delivery of the operator*: it can be a motor, verbal or imitative delivery. The person is blindfolded and his body is the object, the instrument, the operator;

- *Experience*: it is performed by the person and he has to pay attention to the correct position in which the various parts of the body are placed or touched. The experience facilitates the subject's ability to perceive and reproduce upon himself a series of kinesthetic proprioceptive and tactile information in a temporally ordered.

- *Representation*: mental processing of everything that comes from the body and fits both emotional and cognitive dimension. This step is performed immediately after the experience because it remains well impressed in the muscle memory. the subject has to reproduce on the operator (for the exercises about the body schema) or on a palette of plasticize (for the financial Outer Space staff) what he has tested in the experience.

He necessary has to refer to mental motor imagines, in first and third person; the representation allows to detect the level of awareness and the ability to integrate information from different levels (Terzi I. 1995).

5. Discussion and conclusion

By Critical analysis carried out we can assert that the Terzi method is closely related to the study of Embodied Cognition and motor skills.

Cognitive development evolves from the perception of one's being, according to the development of motor functions and their control.

So we can say that the Terzi Method emphasizes the close link between perception - action - cognition: the body with its movement and its interactions with the environment are used as cognitive devices to get off mental activities..

There are different aims of this course: the awareness of their body image and the timeline, the ability to represent the movement and space through the creation of mental images and the ability to integrate personal and extra personal space.

The Terzi Method exercises the integration of information related to one's body with those coming from the environment, facilitating the transition from an unconscious use of body to a conscious use of body in motion.

In fact, Terzi said "the clear or hidden motor act is essential to promote the function of the organs of specific sense" (Terzi I. 1995).

In conclusion, we have to specify that the motility is used as a tool for learning, in which the spatial information are data processing; moreover the delivery, the experience and the representation emphasize the strong link between Perception - Action - Cognition stimulating the function of process planning, control and coordination of the cognitive system, memory and attention.

Space and time are the basis of different activities, neuro-muscular organization and more complex tasks such as reading and writing.

So operators of many different areas have found in the method a useful tool for their work, according to their knowledge and their methods of intervention.

The exercises of this method can help operators to work on the pre-requisites of their objectives.

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Body practices and Brazilian culture: pedagogical contributions to physical education professionals

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Abstract

This work aims to analyze: 1) body practices, in particular the sport, and their relationships with Brazilian culture, 2) generate theoretical elements for physical education professionals to have an effective pedagogical action. The methodological procedure consisted of a qualitative bibliography research. As a result, we identified that it is fundamental for Physical Education professionals, working in schools and leisure places, to perform pedagogical actions that make possible for the subjects to gain access to systematized knowledge, so that they can understand the meanings attributed to body practices that circulate in Brazil.

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Peer-review under responsibility of the Sakarya University.

Keywords: Body practices; Media; Culture; Leisure; Physical Education; Pedagogical action.

Introduction

In contemporary society, the media is essential in the process of spreading the messages and meanings attributed to body practices. Its information reaches various regions and social groups. On the other hand, individuals, as social beings, have the potential to produce multiple meanings. During their social lives, they go through a process of building their identities, which occurs based on their relationships with society. This process can lead them to disprove of, accept, or oppose information spread by the media. Thus, we can believe that body practices (sports, martial arts, dance, gymnastics etc.) are understood in a certain way in Brazilian culture. During this process, we determined that pedagogical action regarding body practices is fundamental to allowing various subjects access to knowledge so that they can evaluate the values and meanings attributed to such practices.

For the development of the text, we initially present the methodological research procedures. Then, we present the search results and discussion, which are divided into two parts: 1) Body practices and their relationships with Brazilian culture and 2) Body practices and pedagogical contributions to physical education professionals. Finally, we summarize the conclusions of the investigation.

Method

We conducted bibliographic research at the library of Methodist University of Piracicaba (UNIMEP), using Academic Google and the Scielo database. The bibliographic research was performed using the following keywords: Body Practices, Sport, Culture, Leisure, Physical Education and Pedagogical action.

A literature review was used as the methodological procedure. This type of analysis corresponds to qualitative research. For Minayo (1994, p. 21-2), this type of research:

(...) answers very particular questions. She cares, in the social sciences, about the level of reality that cannot be qualified. In other words, she works with the universe

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of signifiers, motifs, aspirations, beliefs, values, and attitudes, which correspond to a deeper space of relationships, the processes and phenomena that cannot be reduced to the operationalization of variables.

Regarding the treatment given to the books that served as references for this paper, our reading, analysis, and text interpretation were in accordance with Severino (2007):

- The textual analysis consisted of finding information about the author of the text and verifying the vocabulary and historical facts presented by the text in the hope of identifying the scheme of the text so that it is possible to obtain a better view of the whole.
- We performed thematic analysis, which was the act of listening and “capturing” the author, without interference in his or her message, by asking the text a series of questions. The answers to these questions provide us with the content of his or her message.
- We performed interpretative analysis, in which we attempted to understand the ideas presented by the author interpretively. By performing this type of analysis, it is also possible to understand the ideas critically, i.e., in terms of the creation of a critical judgment or the taking of a particular position.
- The problematization approach, which is a type of approach that leads to problems, will also be discussed.
- The fifth and final step involves a personal summary, a logical writing construction that allows the scholar to make progress in developing the author’s ideas.

Results and discussion

3.1 Body practices and their relationships with Brazilian culture

Body practices are part of the physical culture of a society; they involve men and women in movement, their gestures, and their way of expressing themselves physically. There are two fundamental types of body practices: western, such as gymnastics, sports, and walking, and eastern, such as tai-chi, yoga, the martial arts, etc. (Carvalho, 2006). By studying body practices and their relations with Brazilian culture⁷⁷, we may understand the meanings attributed to body practices in Brazilian context.

Bauman (2008) points out that one benefit of our modern society is that it offers people the opportunity to be happy in the present life, not in heaven, as it did in the past. According to the author, our society cannot bear the idea of unhappiness, and he considers our reality to be a sadly standardized one.

In a certain way, when choosing this discourse, we move in the direction of sameness, in which our behaviors and way of life are strongly influenced by the market, the media, and consumption. As Bauman (2008) affirms, people who do not fit into a certain pattern can be excluded. The recent increase of the number of plastic surgeries is important and should be understood as one of the consequences of social pressures in our modern context. Plastic surgeries are the result of the technical and scientific improvements of the last century, but during that century, they were typically only used in extreme cases because of the high risks. Today, plastic surgery is about money and desire. Many times, it is observed that:

Plastic surgery is not to remove a scar or reach an ideal form that was denied by nature or destiny, but it is about being updated to match trends that change quickly, keeping one’s own value in the market and disposing of an image that has lost its use and its charm in such a manner that a new public image takes its place (Bauman, 2008, p. 133).

Plastic surgery has become an attractive method for people who want to have “perfect” bodies quickly. However, although cosmetic surgery can give people instant results, it is dangerous, sometimes even leading to death.

⁷⁷ According to Geertz (1989) culture is webs of meanings that human beings have woven and their analysis.

In the debate over body practices, we cannot ignore the influence that the media has and its relationship with society. We do not intend to disregard what is called the cultural industry,⁷⁸ with its discourse that exalts the beauty of the perfect body, with its perfect measurements and perfect weight. Accordingly, we realize that the media propagates the notion that physical exercise is the way for people reach the ideal body model shown everywhere. This type of ideology regarding physical beauty has many negative aspects, such as the creation of stereotypes. Those people who fit the ideal standard are given positive labels, and on the other hand, those who, for whatever reason, do not have ideal bodies are characterized negatively.

In the contemporary scenario, there is a cult of the body, which most of the population supports by seeking the ideal of corporeal beauty or trying to fit themselves to the body models shown by the media. People do this in an attempt to avoid being negatively stereotyped. Thus, many people play sports, go to the gym two or three times per week, or even exercise on their own in squares or parks. In these ways, they engage in physical exercise⁷⁹.

We should not stop exercising simply because exercise is being used in the discourse of the cultural industry. Such body practices are one manner in which people use their free time; they often develop their social and personal skills in this way. Moreover, the fact that certain body practices are spread by the media does not mean that they do not have their benefits. Exercise aids in the creation of identities, helps establish social links, and does not necessarily indicate that a given individual supports the discourse of the media.

For many people – who consciously or not are guided by the media discourse – exercise has become an obligation. Thus, it is one of many body practices. According to Damiani and Silva (2005), this is a problem because as body practices become consumable products as we can observe in the Brazilian context, they lose some of their symbolic value; those people who practice them are doing so to fit themselves to body models rather than have access to the practice itself. Moreover, the generalized reasons for and meanings of body practices are spread by the cultural industry. In the words of the authors above,

Statistical data and standardized measures are being processed by professionals in various places and contexts, indicating a tendency toward globalization that is overwhelming cultural diversity by using science. Accordingly, science, as a form of merchandise fetishism, may become the new myth in this contemporary context (Damiani & Silva, 2005, p. 55).

Giovanni (2005) attempted to understand the way in which body practices have entered the consumption universe, thus constituting a sector of products and services. To him, in the last decades, there has been an increase in the role of sports in contemporary life. It is not rare to see businesses that invest money in clubs and sports associations to encourage body practices. In the author's own words,

In this context, there is an integration of the economic construction of the market with values related to bodily activity. The athlete (professional) has the function of model from the perspective of values related to the body (personalization) because he or she has experienced increased social status through the institutionalized use of the body (Giovanni, 2005, p. 170).

However, it is important to understand this cultural industry – which greatly affects body practices and sports

⁷⁸ Based on Adorno's ideas (1986), we can understand that the term "cultural industry" indicates the social process of transforming popular culture and art into a product to be consumed.

⁷⁹ The concept of physical activity is associated with energy loss and calorie intake. There is an agreement among various health professionals that physical activity is essential in preventing and controlling chronic diseases such as heart and respiratory diseases, diabetes, obesity, and cancer. Physical exercise should be understood as a subgroup of physical activities that implies the planned repetition of a particular movement or group of movements with the objective of improving or maintaining fitness (Carvalho, 2006).

– not as something delimited but as an effect of the way society socially and economically organizes itself. Capitalist production, together with liberal political measures, creates a culture of competition among citizens. They must always try to have the best and be the best in accordance with the model imposed by the cultural industry.

Soares (2005) signals that we are indoctrinated into this standardization very early in life. We can verify this by examining schools, which are understood by many scholars as micro-societies. The most common body practices in Brazilian school culture are football, handball, basketball, and volleyball. These practices tell us much about society because on and off the court, there is pressure to win. The most efficient way of obtaining victory off the court and having the privileges of being a winner is by transforming life into a business. In this business, everyone wants to enjoy the glories of success by being the best. The search for outstanding performance results, according to Soares (2005), is in a cult of performance. For the author, the background of this cult is competition. The drive to be the best makes society ever more competitive, transforming the other into a rival. According to the author,

The *cult of performance*, as a rule of life, creates the perfect synthesis of competition and consumption, which is constructed from the idea of *fair play* provided by sports competition and *consumption* as a form of personal realization. Life is, in fact, a company! (Soares, 2005, p. 48).

This interpretation that there is only space for the best in society applies to beauty as well. After all, there is a model of beauty, an idea regarding how tall we should be and how many kilos we should weigh. The best individual must be attractive; he or she must have an adequate body based on the standards of society. Thus, a simple walk is now a physical activity. Whereas we considered the path we walked before, our eyes only see the changing of the numbers on the pedometer now. Moreover, to be the best, one cannot waste time with gestures or practices that will not result in some benefit. They should not be performed even if they give some pleasure.

The notion that the perfect body can be obtained through the practice of sports is spread via the idea that “Sport is health”, as we can observe in Brazilian culture. Melo (2001) attempted to determine when sports became associated with a healthy life. According to him, sports were introduced in Rio de Janeiro around the 19th century with the creation of a “running club” in 1849, in which the body practice was horse riding. This means that the practice was different from that of today because the physical effort was made more by the horse than the man. In the last fifteen years of the 19th century and the beginning of 20th century, sanitation⁸⁰ became more prevalent. According to Melo (2001), this had an effect on some of the rowing clubs in Rio de Janeiro. At that time, the practice of sports was a trend in Rio de Janeiro, and taking advantage of this, the directors of rowing clubs began the process of reframing them, pointing out the benefits of the practice for the population. During that time, based on positivist theories, the atmosphere of the capital of Brazil became focused on progress, and this, in Melo’s words (2001), “depended on healthy individuals, physically and morally”.

Considering body practices to have meanings and significations for those people who practice them enlarges the possibilities of studying society and its interactions with the individual. It allows us to focus on new objects of analysis that were disregarded before. For example, we can briefly examine the importance of football in Brazil. This body practice is appreciated and practiced universally, but in Brazil, it has particularities, not only in the money it brings but also in the meaning associated to it. During the military dictatorship (1964-1984), the government used this sport to obtain popular support. Thus, football served as a political instrument.

One of the primary concerns of the military leaders who were in power was to transform Brazil into a great power. With the objective of creating an “economic miracle”, the military leaders borrowed foreign money, invested in industry, and “made political propaganda in the form TV advertisements that linked the ‘economic miracle’ with the presumed positive features of Brazilians and the actions of the dictatorial government” (FICO, 2001, p. 181). Investing in the image of a great Brazil, entrepreneurs, who were then in the hands of the military leaders, could finally move forward. At the same time, football was established as the most popular sport among Brazilians, and the national team twice won the world championship; it was considered the best in the world.

⁸⁰ One example of these sanitation measures was the Vaccine Rebellion. See Sevcenko (1993).

Since the beginning of the military regime, the parallel between football and the power of the Brazilian nation was drawn: “at that point, there was the total belief that Brazil, this huge country that was now in good hands, could be the leader of the first world because it already had the best football team on the planet” (Guterman, 2009, p. 153).

Seeking legitimization and approval from the Brazilian population, the dictatorship used football as an important tool to move the masses and integrate the national community. In the World Cup of 1966, a great deal of money was invested in publicity for the football team, who would certainly come back home as winners. According to Marcos Guterman, the 1966 World Cup was filled with optimism. The entire nation was sure of victory, but the pressure on the players may have caused their shameful defeat.

Although they were defeated, the relationship between football and the Brazilian essence was already cemented because of the great publicity of the team during the World Cup. Using this example, we can show how important body practices are for society.

Investigating body practices allows us to inquire into actions and activities that, at first glance, seem to have only the meanings that the media gives them. However, when we pay more attention and approach them not only as simply physical activities but also as a way of manifesting a particular society's values, we can note that they are as complex as any other type of human manifestation. It is interesting to subject this complexity to analysis because it allows us to break away from consolidated forms of thinking, such as common sense, for example, the notion that a particular body practice, such as lifting weights, has only corporeal-esthetic meaning. Thus, not everything is as it seems. To be more specific, not everything has the meanings that are attributed to it by the media and/or common sense.

3.2 Body practices and pedagogical contributions to physical education professionals

Pedagogical actions performed in schools and leisure places allow individuals access to knowledge and allow them to attribute new meanings to body practices. Thus, they gain the capacity to intervene in, reflect upon, and review the influence of the media, which is widespread in contemporary societies.

Rodrigues Júnior and Silva (2008, p.171), based on the work of Geertz (2003) and Bakhtin (1999), state that the classroom is a privileged space for meeting and the confrontation of knowledge by teachers and students:

The confrontation of knowledge indicates that the classroom is a space for collective construction between students and teachers; it can also be understood as a place of necessary tension that destabilizes the knowledge of common sense and allows the construction of “something new” that is produced from the inter-relationship among the subjects.

Implicit knowledge, or common sense, is outlined by the “first impressions” about a particular social phenomenon. In this case, we can believe that the implicit knowledge of students in Brazilian schools is that body practices are a way of obtaining beautiful and healthy bodies. Also, the fact that students feel moved to support a specific football team shows a logical orientation toward the consumption of products created by the cultural industry.

Another reference we have as a basis for considering pedagogical behavior is the presuppositions of Freire (2005) about education for freedom. When saying a word, a human being transforms the world because, according to Freire (2005, p. 91), “(...) the dialogue imposes itself as a way in which men, as men, obtain meaning.” From this perspective, dialogue is seen as an existential demand, a meeting at which reflection and action are brought together with the intention of transforming and humanizing the world.

The author, when defending an education for freedom, makes a counterpoint to the view of “banking education.” In doing so, he is moved by the fundamental relationship between narrator and speakers. This type of relationship implies a narration by a subject – the narrator – and the patient objects, listeners – those being educated.

The educator, in the vision of “banking education”, is an agent and a subject, and his task, according to Freire (2005), is to “‘fill up’ the students with contents from his narration, contents that are cut into pieces and disconnected from the totality from which they come” (p.65-6).

Instead of communicating, the educator makes “communications,” deposits that students memorize and repeat (Freire, 2005). This view of education implies pedagogical behavior that favors the acceptance of the system in which we live and capitalist society, instead of potentiating subjects to produce multiple meanings so that they make choices, increase their reading of the world, and transform their realities. In these terms, “banking education” feeds the contradiction that exists in capitalist society.

Freire’s ideas (2005) about education for freedom and Rodrigues Júnior and Lopes Silva’s (2008) ideas about the classroom are references to considering pedagogical behavior with regard to students in elementary schools. They also considers the influence of the media on contemporary society through the spreading of body practices. It should be clear that those authors give us bases for action. They allow us to consider the influence of the media in the sense that it transforms the information within knowledge. Thus, we do not have the intention of excluding or not considering the discourses presented by the media. Rather, we should provide subjects with the ability to reflect upon and question such discourses.

Conclusions

We finish our explanation with the conclusion that body practices are spread by the media as consumable products; the subjects have the potential to bring new meanings to the images and information produced by the media and the schools and leisure places are essential to achieve this goal. It is evident that it is from such institutions that many individuals constitute their knowledge of society. In other words, common sense arises due to media discourse. According to Rodrigues Júnior and Silva (2008, p.160), “common sense allow people to structure their ways of thinking, planning, visualizing, and understanding the world around them and the reality they belong to” This constitutes their immediate view, and it can fulfill their daily needs.

The actions of physical education professionals in schools and leisure places are essential because they will permit social groups to have access to other models via which to understand society. Finally, it is through the educational process that the subjects will gain access to systematized knowledge of body practices and thus be able understand the meanings attributed to body practices that circulate in Brazil and to attribute new meanings to them.

The objective of this study was to produce theoretical bases via which to construct pedagogical action, thus giving individuals access to knowledge about body practices. This will allow them to consider the influences of the cultural industry/media – which exist in the form of common sense – as well as the meanings attributed to such practices by the individuals. The construction of a pedagogical action requires the theoretical support given by a teacher. After all, we must establish effective knowledge construction results so that teachers can, together with students, confront the many views and understandings of the world.

The work carried about above privileged the Brazilian context in order to develop reflections about body practices. However, other studies related to sports, gymnastics, martial arts, dance, and body practices in general in various realities and cultural contexts could contribute to physical education. These different realities have particularities that can constitute new elements and references for the construction of pedagogical action in the field of physical education and leisure.

Acknowledgements

We thank FAPIC – Methodist University of Piracicaba for funding this research and CAPES for funding the participation in INTE 2014.

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Body, education and children's literature: an experience with a group of 6th grade students of English as a foreign language

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Abstract

This paper presents part of a research project on picture books targeting children. The main research problem lies in the fact that foreign language teaching is very often textbook-based, which means presenting texts as pretexts for learning a language and presenting language in separate parts, as if language were a separate part of the speaking subject. Against this background, the paper aims to present an experience with a group of students who research picture books for enactments. Qualitative data analysis includes a field diary, a dialogue journal, picture books and online contexts for promoting children's literature.

2014 The Authors. Published by Elsevier Ltd. Peer-review under responsibility of the Sakarya University.

Keywords: Children's Literature; Picture Books; Education; Foreign Language; English; Body

1. Introduction

This paper is supported by a Freudian and Lacanian psychoanalytic perspective which takes into account the role of language in the constitution of the subject. In order to explain what that means, one can make use of the neologism "language-body" (*corpolingagem*, in Portuguese), which makes the incidence of the signifier on the human body explicit. Before the incidence of language or the incidence of the signifiers on the body, there is only an organism, a human body, not a subject. It is because of the incidence of the signifiers on the body that an organism becomes a subject, a speaking subject. For this paper, it is assumed that a subject who is the effect of language is necessarily mobilized when they encounter a foreign language (Revuz, 1998, Moraes 1999, 2009, Freire and Murce, 2009), and is especially mobilized if the foreign language appears through literature. And because of the fact that literature presents language, signifiers and silence in such original ways, it provides a language-body with the possibility of having an experience as a poetry body.

In terms of education policy, *The National Curriculum Parameters* (PCN) (Brasil, 1998), has played an important role as a background for this paper, particularly in four aspects: a) the discursive engagement of students, b) the development of students' autonomy, c) the importance of reading literature, and d) cross-cutting themes. The first two were especially relevant for the use of dialogue journals between teacher and students, and for the students' experience in groups. The other two were particularly significant in the sense that the books read in class address crucial social issues which the PCN call cross-cutting themes, that is, ethics, cultural diversity, and sexual orientation.

When speaking about children's literature, one should start by saying something about literature itself. Differently from everyday language or language used merely as an instrument, be it to order food at a restaurant, for instance, or buy a ticket to a concert, examples so very often found in textbooks, language in literature calls

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the reader forth as an interpreting speaking subject who has a body.

In terms of children's literature, the reader's body is called forth not only because of the gaps between the words and sentences, but also because of the illustrations and lacunas between them, which provide a sensory experience, making the reader's body part of the artistic creation process. Judith Thistleton-Martin (2008, p.90) reminds us, along with Perry Nodelman (1992), that "the act of interpreting and making meaning from picture books necessitates the reader filling in not only the gaps that appear in the text and the illustrations, but also the gaps that lie between".

Why enactments? The purpose of working on enactments with 6th grade students of English is the effect of my previous study (Newton Murce's *Corpoiesis, a criação do ator*, 2009) on the process of creation of an actor's body. One of the insightful discussions in the book is the relation between text and actor. Instead of assuming the text as an instrument to be used by an actor for her/his body performance, it is the actor's body which is offered to the text in order to be rewritten into the scene, as a poetry body, or poetry itself. After a long period of rehearsals, which means a lot of work with repetition, but never repetition of the sameness, and a lot of work with the gaps between the words and sentences of the text, a poetry body is then written into the scene. It is not intended, of course, to compare the creation of an actor's body with a student's performance, but at least it is possible to try to work with literary texts in the classroom not merely as pretexts for learning a language, but as a body experience, a creation experience. In this case, process is more important than product, that is, the experience lived out by students while rehearsing and not while performing for a big audience.

2. Methodological procedures and data analysis

The selected classroom activities I am reporting and analyzing were drawn up in 2012 for a group of 21 6th grade students of English as a foreign language. There were 11 boys and 10 girls aged between 10 and 13 in this group which was having 2 forty-five minute English classes a week in its curriculum for the first time. Different materials were used in the classes throughout the year, such as folk songs, jazz chants, poems, and a textbook, but for this report I focus on picture books and online contexts which promote children's literature. Dialogue journals between teacher and students were also used. Initially, at the end of class, students were asked to make entries in their journals using the following four questions as a basis: "what did I do in class today?; what did I learn?; what did I like most? how did I feel?" They could write in English or Portuguese, code-switch, and, of course, use a dictionary. I then collected the journals and answered each at home. Most of the time, I wrote in English, but sometimes I code-switched or wrote in Portuguese. After some months, I decided to leave the journals with the students right at the beginning of class so that they could write in them at any time they wished, and not only at the end of class. There were three main reasons for writing journals in class: a) to raise students' awareness about their own learning experience, which contributes to their autonomy; b) to provide alternative use of the target language, in a more meaningful context; c) to stimulate students to take a stand, whether on the classes themselves, discussion topics or personal concerns.

2.1. The first step

First of all, students were asked to research online contexts which promote children's literature in the computer lab. The aim of encouraging students to research online contexts for the promotion of children's literature was to make them familiar with the field not only through picture books, but also through other media, as a means of helping them to choose what they liked best or where they could find what they wanted or needed to read or research, depending on their aims. In other words, it was a way of contributing towards students' autonomy. In the lab they were supposed to follow instructions on handouts previously prepared by the teacher:

Handout 1: 1) Search *Google, Ask and Yahoo* and answer the following question briefly: what is children's literature?; 2) List some types of children's books you find on the internet; 3) Write some characteristics of each of the following categories (use "they are...", "there is/there are..." or "they have..."): a) picture books:... b) legends:... c) fairy tales:... d) fables:... e) poetry:...; 4) Can you find animated books for kids online? What is the site called? Is there a charge or not? Let's read a book online? Which one? Do you like it or not? 5) Search the link "interactive ebooks for children". There's a story online. Can you read it? Do you like it or not? 6) Choose one of the stories you read and act it out for your class (if it is too long, you can act part of it, ok?).

Handout 2: 1) Search the three sites below. What do they have in common? a) 2012 Notable Children's Books; b) The Canadian Children's Book Centre; c) fnlij.org.br/principal.asp; 2) In five minutes write words or expressions in English whose meanings you can infer. Example: finalist; 3) Now try to infer the meanings of the following words or expressions: a) written and illustrated by (The Canadian Children's Book Centre); b) picture book award (The Canadian Children's Book Centre); c) younger/middle/older/all ages (2012 Notable Children's Books); d) shopping cart (The Canadian Children's Book Centre). 4) Find the books *Prudence wants a pet* and *Over and under the snow* (2012 Notable Children's Books). Who are the authors? Who are the publishers? Who are the illustrators?

Considering the fact that students were getting more familiar with the new English terms they had found while researching, such as "play, next, classic, order, samples etc.", as well as terms related to the field of children's literature, it can be concluded that the online research resulted in the production of knowledge and autonomy on the part of the students, as the following utterance in one journal proves: "*Finalmente eu consegui entender a relação dos site, I think, I dont know [...]. Finalmente descobri o que é shopping cart*".

2.2. The second step

After students had researched online contexts for promoting children's literature, we started working on Canadian and American picture books selected from the recommended lists of the publication *The Canadian Children's Book Centre's Best Books for Kids and Teens* and the online lists of *Notable Children's Books*, by *The Association for Library Service to Children*. The selection of books is part of another study about children's books that I have been working on since 2011, after a visit to *The Centre for Research in Young People's Texts and Cultures* (CRYTC), at The University of Winnipeg, Canada. Although there is an increasing number of picture books which target older kids or even adults, I use "picture books" as they are referred to in the publication *The Canadian Children's Book Centre's Best Books for Kids and Teens*, that is, books targeting younger kids, between 1 and 11 years old.

As well as being highly recommended, the books used in class were selected according to the observation focus I have been investigating in my research project, which is the representation of changing families. Books were also selected if they dealt with burning social issues which somehow interfere in students' constitution as subjects, such as tolerance, self-acceptance, respect for diversity, be it ethnical or sexual, and so on. In this way, the selection of the books reflects the National Curriculum Parameters (PCN) recommendations about cross-cutting themes.

Students were then introduced to the fifteen books I had previously selected from the lists by the American and Canadian institutions. Before moving on to an initial reading of the books, I brainstormed with them what is done in pre-reading. The following aspects were thus highlighted: looking at book cover, illustrations, author, publisher, textual clues, characters, context, theme, cognates, inference, previous knowledge, prediction. Although the students registered the terms in their notebooks in English, part of the discussion about them took place in the mother tongue.

Having done that, we moved on to an initial reading of the books in the school library where students either sat in pairs or in groups of three. A few minutes were allocated for a quick reading of each book by a pair or a group of three. After that, each book was passed on to the closest desk, and so on, so that every pair or group of three had an opportunity to get to know all the books. The aim of the activity was to make the students choose the book they liked best and which they would like to work with later on. That meant they would move into deeper reading comprehension which would result in a script to be rehearsed and enacted, in what I call "body writing".

The next step was then to have students working in groups, according to their reading choices, in order to write a script with the teacher's help. They started this task, but as the school year was about to end, I had to finish the scripts myself, so that the students could begin the rehearsals as soon as possible. With the scripts in their hands, I marked out the scene space for each group and recorded lines for those students who wanted to have them in their cell phones, so that they could practice pronunciation at home.

3. An analysis of the results

Positive results were observed a) while the students read and selected the books, b) while they wrote in their dialogue journals and c) while they rehearsed. For instance, the choice of Lesléa Newman's *Mommy, Mama*,

and *Me*, made by one group of students, was an interesting surprise (*item a* – students’ reading and selection of the books). The book narrates the daily routine of a toddler who is being raised by his two moms. One of the students in this group wrote about her choice: “[...] *o que eu mais gostei foi o mommy, mama and me, que eu acho que quis tirar o preconceito das crianças*”. The choice of this book gave the class the opportunity to discuss a little the sexual orientation of those moms in the book, in a natural way, respecting the issue of diversity. In another interesting example, two students chose Tania Duprey Stehlik’s *Violet*, which tells the story of a girl who is the daughter of an interracial couple. One of the students wrote in her journal: “[...] nós gostamos porque a cor purple é nossa cor preferida que nós não temos preconceito com nossa cor do pai e da mãe”.

The main positive aspects with regard to students’ writing in their journals (*item b*) were: a) throughout the school year, students managed to incorporate new vocabulary items and expressions through dialogue with their teacher; b) samples of what I call “slip” in foreign language emerged; c) there were samples of students taking up stances on the classes themselves, discussion topics and personal concerns. I understand “slip” in foreign language as students’ capacity to write without apparent censorship or inhibition. Of course this is not something students are aware of. It simply occurs or does not occur. It can also occur earlier or later. It has much to do with students being captured by the functioning of the language, which conducts their writing, capturing them as subjects, subjects of the Unconscious, of course, since this “choice” of being able to slip in a foreign language is not something the subject can say, name or explain. It is the Unconscious at work.

As far as the students’ body involvement was concerned (*item c* (rehearsals)), results showed the following: a) they were very willing and open to the characters they wanted to interpret; b) they were very helpful to members of their own groups and also ready to participate in other groups where they were needed; c) some students were able to memorize their lines quite quickly and well; d) some students were able to create interesting and sometimes funny body writings; e) most students were very much involved during the classes. These results point to what seems to be the effect and at the same time production of autonomy, as is recommended by the PCN.

At this point it is worth reflecting on the importance of literature and body writing in the classroom. In order to do so, I focus on the difference between role-playing, often found in textbooks, and the preparation of scenes from a literary work. What is this difference? While playing a role in a dialogue from a textbook, the student keeps repeating uncontextualized utterances, motivated by a useful objective (to buy a ticket for a concert, for example), which aims at what is called “communication”. If a similar dialogue is enacted by the same student from a literary work, it is no longer out of context, or motivated by a useful objective which aims at what is called communication. This dialogue is now much more than a mere repetition of useful utterances. Why does this happen? Because within a universe which is that of an enacted scene, whose source is fiction, all dialogue holds within itself a content of truth which results from the fact that all fiction constitutes and produces the effect of reality which is not related to the universe of pretence or imitation, as in role-playing, but to the universe of living an experience.

When the student is in a position which is not only of a reader, but of someone who is supposed to rewrite a literary text in their own body, she/he is not simply going to repeat hollow utterances, as a subject who has no body, which would seem to be the subject of textbooks. When a student rewrites a work of art in their body, a singular experience is lived, an experience with otherness, and a speaking body becomes a poetry body. This is quite different from merely repeating a role in a role-playing activity from a textbook in order to practice and manage to do things or communicate in a foreign country, for instance.

Acknowledgments

FAPEG – Fundação de Amparo à Pesquisa do Estado de Goiás

CRYTC – The Centre for Research in Young People’s Texts and Cultures

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INTE 2014

Brand engagement for university students in depending on the structure of values

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Abstract

The study demonstrates the relationship between the brand engagement, depending on the structure of values in Slovak university students (N=307, AM age=22.3 years). The results show, that for the engagement of brand among Slovak university students the strongest predictor is factor *power*, *benevolence*, *hedonism* and *self-determination*. Slovak university students attach engagement to brands according to display of certain *power*, which may be related to satisfaction of social needs, with emphasis on interpersonal relationships. The perception of the engagement of the brand is associated with lower levels of *self-determination*, *benevolence* and higher level of *hedonism*. Slovak university students can be reached by emphasizing social status and prestige leading to the satisfaction of social contact, highlighting the enjoyment of life and some sensuality with lower levels of independence, freedom, openness and loyalty, responsibility, sense of life.

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Peer-review under responsibility of the Sakarya University.

Keywords: brand; values; marketing communication; university students

Introduction

Brand has now become a phenomenon and sometimes even an idol of the companies that realize its importance in a competitive field, and also that the expansion of new brands interferes with creating loyalty among consumers and the trade mark as an important building block of brand value (Aaker, 2003). According to Kocourek (2011) the brand is a very important marketing communication tool in today's world. The less personal is the brand for the consumer and the less important role it has in his life, the less likely it is that he will make a personal relationship to it (Isakovich, 2009). According to theorists the brand is associated with human qualities through learning and experience. As it turned out, in a competitive field, the focus is not on the physical attribute of the brand, but the brand personality and brand image, as the key aspects of marketing communications of the brand. Brand takes on human characteristics (Aaker, 1997), which, if they are in accordance with one's perception of oneself, raises the assumption of positive acceptance of the brand (Fournier, 1998). In this context, marketers clearly recognize that the relationship of consumer personality and brand plays an important role in building and deepening consumer's loyalty and therefore focuses great attention on monitoring and subsequent evaluation of the relationship. According to Fournier (1998), the relationship between the brand and the consumer develops from an early age of the individual. Important driver of consumer's behavior are attitudes such as mental position with respect to a topic that can positively influence the purchase of a particular brand of products (Fishbein & Ajzen, 1975). In case that the value of the individual which co-create existing attitudes, is consistent with the values represented by the mark, the assumption of positive acceptance of a product or service is increased (Olson & Reynolds, 1983). The given factor is particularly important in the process of consumer's socialization during

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adolescence, when the adolescent seeks to express their personality and at the same time belonging to a certain social group through the brand, which is usually rewarded with the favor of the group members.

Values represent one of the major sources of human motivation that give meaning and direction of his endeavors. They are present during the decision-making process, they affect the mental processes of perception, survival and they recast the proceedings of the personality. According to Schwartz (2003) the values are reference standards, which help man in ambiguous situations. They help him in decision making and subsequent independent proceedings. Framing the theory, Schwartz (1994, p.21) based it on three basic requirements: biological needs of the individual, the coordination of social interaction, group survival. Based on the theoretical concept the questionnaire was developed (Portrait Values Questionnaire-PVQ), which describes 40 characters. For the needs of ESS (the European Social Survey) it was reduced to 21 items, which was also used in our research. The result is a structure consisting of ten cultural universal values. The individual values are described as follows by the author (Schwartz, 2003; Schwartz, 2006): **Benevolence** - the preservation, improvement of living conditions of people with whom one is in frequent personal contact (to help, honesty, forgiveness, loyalty, responsibility, spiritual life, true friendship, mature love, meaning of life). **Universalism** - understanding, comprehension, appreciation, tolerance and protection of the good of the society (welfare) and nature (generosity, wisdom, social justice, equality, peace, beauty, unity with nature, environment protection, inner harmony). **Self-determination** - independent thinking and decision making, creativity, research, independence (creativity, freedom, independence, curiosity, deciding on objectives, self-respect). **Stimulation** - excitement, life's challenges, changes in life (daring, a varied life, an exciting life). **Hedonism** - pleasure and sensuality, enjoying life. **Success** - personal achievements demonstrated through the competence appropriate for social standards (fruit fullness, ambition, ability, influence, intelligence). **Power** - social status and prestige, control or dominance over people and resources (social power, authority, wealth, protection of the public image, recognition in society). **Security** - security, stability, harmony of society as well as relationships with others and oneself (family security, national security, social order, cleanliness, reciprocation of kindness, experience of belonging, health). **Conformity** - avoidance of actions, inclinations and impulses which are likely to upset or harm others and violate social expectations or social norms, or cause offense (honesty, obedience, self-discipline, respect for parents and elders). **Tradition** - respect, commitment and acceptance of ideas and attitudes that are traditional culture and supplied and supported by regions (humility, acceptance of one's place in life, piety, respect for traditions, moderation, impartiality).

Due to our research target we used the theoretical concepts of Schwartz.

Relationship between the consumer and the brand is pursued for a long time with the emphasis on development identifying (Fournier, 1998; Kates, 2000), as well as the importance of individual brands, whereby brand preferences are formed in early childhood and relationship to the brand develops throughout life (Ji, 2002). According to the relational theory of consumer-brand (Fournier, 1998) consumer behavior is put into the light, which helps to understand the dynamics of the relationship between consumer and brand, as well as the role the brand plays in human life.

Another important aspect affecting the decision-making process of purchasing behavior, are predominantly represented values. Therefore, in marketing communications the consumers' value structure is followed in order to determine their preferences (Carter, 1991). Since the values are culturally conditioned, the knowledge of the consumer's structure of values is dependent on society in which they grow up, and this knowledge helps to avoid confusion, misunderstanding the communicated message. Several studies confirm the relationship of values with the social experience of the individual (e. g. Inglehart, 1997, Schwartz, 2003), which translates into value priorities of the personality. That is why it is possible according to Schwartz (2003) while comparing the priorities of values, whether of the group or individual, to detect the impact of major social changes (changes in economic and political conditions) on minority groups, i.e. segments to which the measures are directed.

It is known that marketing strategies should be modified, adapted in regard to the difference in consumer behavior that reflects the values prevailing in each country. This is often pursued in creating, communicating a consistent global brand-image depending on the prevailing values of consumers.

Therefore our aim is to ascertain to what extent is the crediting of the brand importance dependent on the nature of the representation of values in Slovak university students.

Methods

1. Participants

The research sample consisted of 307 university students of the Slovak Republic at age $AM = 22.3$ years.

2. Measures

Using the **Portrait Values Questionnaire** (PVQ, Schwartz, 2006) we measured the character of represented values (Schwartz, n.d., 1994, 1999). For our purposes, we used a questionnaire with 21 character portraits, which were used by the European Social Research (Ilgová, Ritomský, 2009). The questionnaire consists of 21 characters and the participants' role was to determine on a six-point scale (Cronbach's $\alpha = 0.616$) to what degree they resemble those portraits. The given portraits of the people are finding ten value orientations: power, achievement, hedonism, stimulation, self-determination, universalism, benevolence, tradition, conformity, security (the value of the first order).

The brand meaning was measured using a **Brand engagement scale** (Sprott, Czellar, Spangenberg, 2009), which combines the connectivity of the importance attributed to the brand to the personality self-concept. We used a questionnaire consisting of 32 items, which after factor analysis we adapted to the one-dimensional 11-item questionnaire, which explained 49.48% of variance. Participants rated each item on a 7-point scale.

3. Results

On the basis of the objective, that is to determine the extent to which meaning attributed to the brand is dependent on the nature of the representation of values among Slovak university students, we have set the following hypothesis:

Our attention was focused on the assessment of the magnitude of the individual value characters scales influence on the importance attached to brands and assessment of the explanatory capacity of this model by multiple regression analysis.

Table 1. Regression Analysis Reporting the influence of the value character on Slovak students' brands engagement.

Brands Engagement	R	R Square	Adjusted R Square	Std. Error of the Estimate	F	p
Slovak students	0.544	0.296	0.273	1.12	12.47	0.000

In pursuing our values, coefficient of multiple correlation R says that in our case, there is a moderate relationship among Slovak students between the meaning attributed to brands (brand engagement) and character of the values representation (Table 1). Included scales explained 29.6% of variability in values character among Slovak students.

Table 2. The estimates of the regression coefficients among the Slovak students.

		Unstandardized Coefficients		Standardized Coefficients	t	p
		B	Std. Error	Beta		
Brands	Constant	4.83	0.42		11.37	0.000
Engagement	Universalism	-0.11	0.11	-0.06	-0.99	0.326
	Benevolence	0.37	0.10	0.21	3.66	0.000
	Conformity	0.04	0.07	0.04	0.65	0.518

Tradition	-0.13	0.08	-0.10	-1.56	0.121
Security	0.01	0.07	0.01	0.09	0.930
Power	-0.51	0.09	-0.44	-5.84	0.000
Success	-0.01	0.09	-0.01	-0.15	0.884
Hedonism	-0.22	0.08	-0.17	-2.63	0.009
Stimulation	-0.03	0.08	-0.02	-0.30	0.763
Self-determination	0.22	0.11	0.11	2.01	0.046

The strongest predictor for brand awareness among Slovak students is the power factor ($\beta = 0.44$, $p < 0.001$); then it is benevolence ($\beta = 0.21$, $p < 0.001$) hedonism ($\beta = 0.17$, $p < 0.01$) and self-determination ($\beta = 0.11$, $p < 0.05$) (Table 2). Slovak students attach importance to the brands depending on a power raised to a certain extent, which may be related to the satisfaction of social needs, with emphasis on interpersonal relationships. Here we can find indication that the perception of the importance of the brand is associated with lower levels of self-determination, benevolence and the higher rate of hedonism. It turns out that Slovak students can be reached by emphasizing the social status and prestige, leading to the satisfaction of social contact, pointing out enjoying life and some sensuality with lower levels of independence, freedom, openness as well as loyalty, responsibility, sense of life.

4. Conclusions

Utilizing knowledge of the values structure of a particular culture is important for intercultural education, as knowing the values helps to understand as well as to predict the relationship between values and attitudes, behavior, social human experience. It is could be importance to influence at class atmosphere (Hamranová, 2011; Brozmanová, Andreánska & Cabanová, 2005). Based on the values preference the implication to compatible and antagonistic values is easier and thus marketing communication becomes more efficient and more focused.

Slovak university students identified themselves in a higher rate with the values that reflect the importance of social cohesion, conservatism, emphasis on tradition, nature protection, wealth, respect, as well as social rejection avoidance. A higher degree of universalism in our study confirmed previous findings that Slovaks greater consideration is to the situation and living conditions of families, people in their neighborhood (Halman, 2001).

According to Schwartz (n.d.) there is a positive correlation between tradition and conformism and age cohort, which is associated with increasing certainty and avoiding danger and difficulty. The fact that tradition and conformism are represented by the higher rate in Slovak adolescents can also be associated with their lower levels to go into the risks and uncertainties. This aspect is also associated with higher levels of religiosity and conservatism that prevails among the Slovak population (Schwartz, 1999; Schwartz & Bardi, 1997).

Conservatism among Slovaks is also linked with higher gender stereotypes, moral obligations to the state and society (Halman, 2001). For marketing communication in relation to Slovak students is relevant that an emphasis is put on social needs with the strengthening of security, cooperation, promotion of social relationships with respect for traditions and cultural habits.

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Building individual expertise in doctoral studies the significance of everyday experiences and changing contexts

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Abstract

High expectations for skills are directed at doctors and doctoral students in the fast changing global time. Innovative solutions to the genuine problems of society are expected of the new doctors. The expectations for skills that accumulate through the everyday experiences and different contexts, and the requirements for experts in working life are experienced as partially conflicting by the doctoral students themselves. The expertise of doctoral students is individual – it forms in the long term in different everyday contexts and is built from several individual elements. The experiences and expertise of doctoral students forms differently in different contexts. The everyday experiences and contexts are significant for forming the expertise, especially for the female doctoral students with a family.

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Peer-review under responsibility of the Sakarya University.

Keywords: Doctoral student, doctoral studies, expertise, everyday, experience, context

Introduction

Different global and social changes are reflected in the universities, in the education offered by them and in the expectations set for the education. The extensive change requires extensive adaptation, comprehensive understanding and concrete actions. The changes are also reflected in the doctoral education of universities. An attempt is made to answer better than before to the demands for competence in working life with the doctoral education and at the same time education is being intensified and systematized (Cumming, 2010). Internationally, the doctoral education has indeed been unified and attention has been paid to the new demands for competence. Still, the constant change in the contexts forces discussion concerning the future of the doctoral education and the graduating doctors.

Previously, the doctoral education had an elitist stamp and the education was within the reach of few people. Since the doctoral studies have become common when examined internationally and in principle they are accessible to all. At present the doctoral education is understood as high-quality expert education and the expectations towards doctoral education and graduating doctors are increasing. The academic education produces general competence and skills and not the specific professional skills to the marked tasks. The skills which are acquired through doctoral education are narrow and specialized but the increasingly strong trend is that the gained skills need to have utility value (Cumming, 2010).

The doctors' individual skills and expertise

The skills of an individual develop in many different contexts and they form into individual capital. The nature of expertise is developing continuously, it is not made complete, for example, by completing different merits. The doctors' skills differentiate according to the contents and research of the field that is studied. At the same time different skills which are related to the project knowledge, analytic, communication and practical skills are attached to the doctors' expertise. The doctors' skills can vary depending on the field and the skills that are

acquired through individual experiences also define the expertise. The doctors' skills increase in the experiential operation of everyday actions, partly by quietly adopting different ways of action in different contexts. It is significant that of the future doctors only a fraction continues their career in academic tasks, the majority moves to or continues in employment of other working life (Boud, & Lee, 2009; Baker, & Lattuca, 2010.) The identification and recognition of different expertise is important, as well as from the perspective of an individual, university and working life.

The everyday contexts of operation affect the doctoral student's developing and individual skills strongly. For their part the significant experiences which accumulate in everyday and changing contexts help to modify and build different skills and create the future expert career. The individual's experience of everyday life and operation in the different contexts often stay in the margin in defining doctors' skills. In practice the doctoral studies are undertaken from variable starting points, also the everyday concrete contexts and the objectives for the future are varied. It is often assumed that the doctoral students are a heterogeneous group: young people and without a family, who have only recently completed their Master of Arts degree, and who complete their doctoral thesis quickly and in paid employment in the university. Young doctors are certainly a trend which is becoming common internationally but still there are also others among the doctoral students.

In this article I examine the everyday experiences of under 40-year-old female doctoral students with a family and the changing contexts and their significance from the perspective of the developing skills and expertise. Also Pearson, Cumming, Evans, Macauley and Ryland (2011) remind us that individual doctoral students' lifecourse which is composed of individual sectors is continuously changing and the situations vary during the process of gaining a doctoral degree.

Methodology

The article is based on my doctoral thesis in pedagogics (Maunula 2014). The subjects of the study were 12 under 40-year-old female doctoral students with a family who were at different stages and in different fields in their doctoral studies in three different Finnish universities. The aim is to make more visible and to understand the difference in lifecourses of the doctoral students, their different starting points, their everyday life and their objectives as well as the significance of different contexts and experiences from the perspective of the forming expertise.

The research material consisted of 12 narrative theme interviews. The analysis of the material was the thematic content analysis which developed hermeneutically and narratively. The research process contains features of hermeneutic study to which I also apply phenomenological and narrative analysis.

Skills which are formed through the doctoral student's different contexts

4.1 Experiences before and during the doctoral studies

The backgrounds of the female doctoral students with a family in my study were diverse in practice. Generally some of the doctoral students come directly from the Master of Arts studies and are hoping for a career as a researcher, in which case the practical work experience acquired by them outside the university is often minor. Some of the doctoral students examined by me had an extensive working career outside the university before the doctoral studies and some had fairly limited work experience but in turn their study history was intensively efficient. The different doctoral students themselves appreciated all their accumulated work experience, especially international and experience of their own field was evaluated to be valuable in the future. Some had other additional education which they assessed as bringing an individual character to their skills and answer the need for multidisciplinary competence.

The doctoral degree project shapes the individual in many ways (Barnacle & Mewburn 2010). One's own identity is in part recreated, the professional identity also changes with the different contexts and interaction networks. Usually doctoral students pay little attention to the development process of their expertise during the doctoral studies. Comprehensive perception of the process of gaining a doctoral degree was regarded as

challenging on the basis also of this material. During the doctoral studies, varying degrees of awareness were used in different social contexts in adopting the future doctoral roles to be pursued and to be avoided. According to Leonard (2001), women would benefit from more specific guidance or mentoring in their doctoral studies in addition to the general supervision of studies. According to the female doctoral students, there would indeed be the need for more comprehensive guidance and mentoring at the first stages of the process of gaining a doctoral degree, and that would have increased the effectiveness of the first stage. The women with a family need versatile and extensive information for the comprehensive development of a doctoral career.

4.2 Significance of the method of undertaking the doctoral studies

The ones who undertook their doctoral studies as paid work at the university, usually in doctoral education, adopted the practices of an academic world and were socialized in them. The academic culture was experienced as both encouraging and competitive. The closest research fellows functioned as peer support, especially other women with a family shared a similar situation and everyday life. The significance of the experienced peer support was emphasized in the busy everyday life, coloured by demands, of the female doctoral student with a family. The significance of the similar backgrounds and experiences was important and mutual envy was not mentioned in my material. According to the women, every one earned their status due to their own knowledge and skills and on the basis of their achievements relating to research.

In everyday contexts, skills of general usefulness also accumulated. In the everyday life of a family especially time management skills of the female doctoral students increased. The ones who undertook their doctoral studies in addition to other work developed especially strong organizational skills. Their everyday life was intensive and scheduled, in which the clear systematic model of operation was an absolute. The organizational skills and effectiveness would also be central skills in the future, as the career proceeds. Also coping with uncertainty and constant prioritization were skills which became refined in the women's everyday contexts. According to my study, it is more challenging for a woman than for a man (also Moen, & Sweet, 2004) to combine academic research work and family, especially, when both are at an intensive stage.

5 The doctors' skills and expectations of the working life

5.1 Do the skills and the expectations meet?

According to female doctoral students, employment as a doctor seemed challenging, especially when examined during the process of graduating with a doctoral degree. According to them, in the working life the awareness of the skills of graduating doctors was inadequate and too much emphasis was on research, casting a shadow on other skills. On the other hand, according to them the real reality of the working life and requirements for skills were not fully realized even in the doctoral education. The situation caused uncertainty at the individual level regarding the usability of acquired education and skills.

According to the women, the doctoral education was rewarding and meaningful but getting employment after graduating still seemed a major challenge while the studies were unfinished. Nowadays the work careers are individual and reflect constant self-development in the entrepreneurial spirit. The doctors' employment and the working life benefitting from the doctors are current causes for consideration (among others, Leonard, & Becker, 2009). Competition for academic work opportunities has hardened with the doctoral degrees becoming more common, yet simultaneously the structural change of the economic life anticipates better possibilities for the doctors to be employed in the business world (Neumann, & Tan, 2011).

The views on accomplishing the doctoral thesis vary from the product to the process of developing expertise (Stubb, Pyhälä & Lonka, 2012a). A more comprehensive approach is striven for in developing the supervision of doctoral studies, in which attention is paid both to the starting points and the career expectations of the future (Bitusikova 2009). According to my interpretation, the doctoral student's own stronger orientation to the future work assignments would help to perceive the process in the longer term and it would motivate them to sketch different self-imposed visions for the future.

5.2 *Continuous learning and utilising of experiences*

The women in my study had adopted the ethos of lifelong learning profoundly and deeply personally. According to them, the expertise includes constantly adopting the new, learning and developing. It would be natural and also an essential part of the desired work of the future. The doctoral education is a multi-dimensional process which should be examined comprehensively and from different perspectives. It is a process which expands general capability, capability for special expertise and the identity (Kogan, 2000). Billett (2001) points out justifiably that the expert does not manage with schematic thinking in the working life of today; nobody gives clear instructions, there are no ready solutions, performance is not measured with simple indicators and mistakes are not a taboo.

Female doctoral students appreciated all their experiential and contextual skills capital which they had acquired during their lifecourse. Their awareness of their own skills varied. The acquired work experience and skills were perceived as valuable capital and it was seen to have a connection also to the work opportunities of the future. According to the women, the work and education career which had formed would also be reflected in some way in the future expert career. An interesting observation in the material was that the women who had the most extensive work careers were most worried about their future career and the ones with quite a minor career did not worry about it. Perhaps the worry of the first mentioned is empirical: they knew that with a higher level of education the competition and the demands for the expert work assignments would tighten.

There is no exact information about the whole process of graduating with a doctoral degree, the skills formed during that process or future visions which are related to it (Lee, & Boud, 2009). In any case the women in my study were conscious about the significance of the experiences and the different contexts even though earlier they had not reacted to them with particular awareness or target-orientation. One development idea for the doctoral studies could indeed be the higher awareness of the different components of one's own individual expertise.

5.3 *Meaningfulness and everyday challenges*

Women studying for a doctoral degree were still convinced of the meaningfulness of their field in spite of the competitiveness, uncertainty and demands and wanted to develop themselves and their field in the future. The female doctoral students emphasized that the meaningful study subject was promoting their commitment to the research work (also Leonard, Becker & Coate, 2005). According to them, finding a meaningful field and study subject defeated the everyday adversities and challenges that belonged to the work, such as financing worries, slow progress and constant lack of time. The pleasure that was received from working with a meaningful study subject, publications, financing and the insights into contents were significant everyday experiences which encouraged them to continue.

At the same time, it was important to pay attention to the changing world according to the women— both large and smaller contexts are changing constantly. The globalization and the different network based solutions make it possible to get to the core of the own discipline, also from the middle of the commitments of everyday family life. According to the women, the research was not separate from everyday life, something that takes place in the researcher's chamber or is mystical. It was ordinary everyday work and it would be possible to be in the core of scientific research, even if one was geographically far away and caught in the contexts of everyday life. According to the women's experiences, new skills such as online communication and networking, as well as efficient time management skills, increased alongside the core skills in science. The scientific and the ordinary can indeed be interpreted as closer to each other still – science reaches everyday life more strongly and scientific work is interwoven with everyday life, in everyday and changing contexts.

6 **Conclusion**

The skills that are acquired in the doctoral studies are formed over a long period. They are built as lifelong and lifewide learning in the different everyday contexts during the whole lifecourse. Not all skills can be documented. The core of the process of gaining a doctoral degree is an active individual, pursuing the expertise, their own study

and the scientific community which link with real contexts. Barnacle and Mewburn (2010) emphasize this process being comprehensive and reflected in the identity and in which one becomes the expert of their own field, a scholarly person. The process of gaining a doctoral degree changes the human being and different people change differently. The change in one matter is unavoidably reflected in the whole.

A more comprehensive and wider approach is supported for the doctoral education (Cumming 2010). The doctoral education is in between the new and the old time. The traditional academic doctoral education is becoming competence based and strengthening the new models of thinking and operation. At the same time the creative component of working on the thesis is emphasized, rigorous external control or tying it to a time and place is not suitable for it. The flexible individual orientation of doctoral studies points to the importance of continuous learning, not only completing the degree (also Pearson etc. 2011). Halse & Mowbray (2011) emphasize that the clearly shown benefits and advantages of doctoral studies are multi-dimensional, they cannot be unambiguously proven, measured or evaluated. Globally the doctoral studies are expected to yield a profit for the investment which on the other hand demonstrates restricted understanding of the doctoral studies and at the same time restricts the different dimensions of the process of gaining a doctoral degree.

The graduating doctors face a very different society, reality and future compared to how it was in earlier decades. The increase in the number of doctors, the change in the form of knowledge and information and overall change in the doctoral education create the need to examine the current practices and foundations in doctoral education. The doctoral degree qualifies graduates better than before for the demanding expert tasks of the working life (Dill, Mitra, Jensen, Lehtinen, Mäkelä, Parpala, Pohjola, Ritter, & Saari, 2006) and the doctors' employment outside a traditional academic context has become common (Neumann, & Tan, 2011). The change forces discussion about the future of the doctoral education and of prospective doctors. The doctoral education is expected to answer the demands and expectations set for it, these are being set also by the future doctors (Boud, & Lee, 2009). Within the contents and practices of the doctoral education it would be of high quality to pay attention to the needs of working life and of prospective doctors looking to different careers. It would be positive to clarify also the significance of the transfer effect of previously gathered knowledge and in a way that can be adopted personally (Dill etc., 2006). The doctoral student's contexts contribute in many ways in the learning process (Stubbs, Pyhältö, & Lonka, 2012b) and thus the future doctors' rakentuva developing skills are quite individual – one cannot talk about the doctors by generalizing but about the individually skilled experts who are equipped to operate in the changing contexts.

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Building the life-long learning competence in undergraduate engineering students with a laboratory practice in learning curve

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Abstract

This research presents the perception of undergraduate engineering students in the development of the competence "life- long learning" during a laboratory practice. The main topic of the session is "the learning curve" applied to human-systems integration problems, and specifically involves the design of a training plan for the handling of fire extinguishers using a fire simulator. Students were introduced to a challenge: to analyze and to model the learning process and the impact of the forgetting factor. The results obtained confirm that the proposal contributes to the development of knowledge and enables addressing professional skills such as "life-long learning".

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Peer-review under responsibility of the Sakarya University.

Keywords: Learning Curve, Life- long Learning, Engineering Education, Assessment

Introduction

Permanent learning or "life -long learning" is an active process that seeks, understands and applies knowledge to achieve personal and professional goals throughout life (Seval & Gulsun Atanur, 2012). Life -long learning can be understood as the way in which voluntarily and self – motivated professionals constantly seek for knowledge (Myers & Greenson, 2012). Aynur & Bülent (2009) define the "life -long learning" as all learning events carried out to develop the knowledge from the individual and social dimension, in order to achieve a quality life and a constant learning in a developing world. Indeed, "life -long learning" competence is not only related with academics and / or professionals, but it is also found in many aspects and events throughout life. This competence is essential in the training of engineers and is determined in the accreditation model of the Accreditation Board for Engineering and Technology ABET (ABET, 2012; Chittister & Haimes, 2011)

Educators today have the commitment of developing in students the knowledge for life (Blaschke), enabling them to effectively and creatively apply the skills and competences acquired, because of the demands of an increasingly complex and changing world (World Bank, 2003). Pedagogical and andragogical methods are not quite sufficient to fully prepare students (Rachal, 1994). Therefore, a more self-directed and self- determined approach is needed, in which students reflect on what is learned and how to learn, and in which educators teach students how to learn for themselves (Peters , 1998 ; Presley 2011).

A suitable learning environment facilitates the development of skills in the students and their ability to learn (Ashton & Newman, 2006; Bhoyrub, Hurley, Neilson, Ramsay, & Smith, 2010). The role played by the laboratory practices is vital to the training of engineering professionals and the development of their professional

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skills. The available technologies have brought new development of teaching methods, learning resources and variety of digital media (Brooks & Gibson, 2012). With this, students can explore scientific phenomena, data collection techniques, models and theories of science in physical laboratories that support interactions with the material world using new technologies. The implementation of new laboratory practices and pedagogical approaches in engineering programs is imperative to take advantage of technological resources and create environments that enable the development of autonomy and self-direction of students. Likewise, it is important to innovate in more interesting scientific experiences to keep students motivated. (de Jong, 2013).

Two teaching methods and combinations of them are found in the literature with the aim of developing effective "life-long learning" competence: The small group interaction and the use of information technology. According to Vico, Sharron, Caroline, Angela, and Mak (2012) interactions through small working groups promote knowledge sharing, discussion, active listening and constructive feedback from students. Thus it is possible to achieve self-directed learning helping students to assume responsibility for achieving their own knowledge. In small groups, students are motivated and able to play an active role in the exploration and development of new knowledge cooperating with the general learning abilities of the group (DiMarco & Luzzatto, 2010).

The implementation of information and communication technologies ICT has proven to be an important resource while teaching the competence (Durán del Carmen, Talavera Serrano, Hiniesta, & Gutiérrez, 2011). By including these tools in the methodology of the course, students are actively involved in building their knowledge while staying updated on the use of new technologies. Students need to develop skills while acquiring knowledge through technologies that allow them to direct their own studies and learning methods (Class, 2011).

With the addition of new knowledge as the course of the student training progresses, the prior knowledge acquired disappears quickly causing the popular "catastrophic forgetting effect" (French, 1999) and the "catastrophic interference" (McCloskey & Cohen, 1989), which are major obstacles for the development of the "life-long learning" competence. Several series of studies have highlighted the importance of the competence in the training process (Mayhew, Wolniak, & Pascarella, 2008), the characteristics that make a "life-long learner" (Fatih, 2012), and even the way to adapt the environment in order to promote the development of the competence (Wielkiewicz, Prom, & Loos, 2005). Despite the above, there are few studies that have focused on the development of teaching practices and methods that enable the development of this competence in students.

Understanding how learning occurs and modeling its process, help create interest in the students in their cognitive training. The learning curve is a tool to realize this approach, and help to change the imaginary around the nature of learning (Anzanello & Fogliatto, 2011).

Its impact on the improvement of processes and production planning gives special importance in the training of engineering professionals (Morrison, 2008). Because the learning curve concept is related to the evaluation of the different ways in which a person acquires, updates and maintains his/her skills and knowledge, the authors found an opportunity to use it as a support tool in the development of the "life-long learning" competence.

Methodology

1.1. Participants

The experimental sample comprised 75 undergraduate industrial engineering students from Barranquilla, Colombia. None of the subjects have any prior experience handling fire extinguishers. Average age was 19.54 (SD = 1.149) years and ranged from 18 to 22 years.

.2. Materials and Equipment

In this study, the fire was simulated with the Screen BullEx BullsEye ® and the Fire extinguisher with the BullEx HotShot ®, described as follows (Fig 1):

- Level controller (BullsEye's electronic control system ®). Contains the three classes of fire: A (Trash–Wood–Paper), B (Liquids), and C (Electrical Equipment). It has also four intensity levels. It is necessary to set up this controller before starting the simulation.
- Screen (BullEx BullsEye ®). The direct output of the simulated fire. It has white points below the screen, and the frame color is red.
- Fire extinguisher (BullEx HotShot ®). Imitates a medium size fire extinguisher. It has a black hose that contains a green laser on its top. To fire the laser it is necessary to pull the handgrip. It also needs to be loaded every certain time of use because the laser becomes weak, and to do this, a button below the handgrip must be pushed (this simulates the real reloading).

This equipment allows the user to learn how to efficiently use a fire extinguisher without the cost and cleaning associated with a real dry-chemical or CO2 extinguishers.



Fig. 1, Training tools

.3. Procedure

At first, a lecture was given to students by the teacher in which they were trained with the theoretical / practical elements about the learning curve, and the proper handling of the BullEx BullsEye ® fire simulator and the BullEx HotShot ® extinguisher was shown to them. At this point students were encouraged to consider the way human beings assume learning and the importance of considering variables such as the forgetting factor and the practice in all learning activities undertaken in personal and professional life.

Additionally, a survey was given to all students for the assessment of attitudes, leading to the student reflection and articulation of their imaginary with the activity.

Working groups were created where a single representative serves as an experimental subject for carrying out the 10 tests with the fire simulator and thus collect the necessary data to evaluate the learning curve. For three weeks, Industrial Safety practices were carried out in the laboratory of the Industrial Engineering Department. Each test was carried out considering an interval of at least 6 hours and not more than 48 hours. With these data, the groups performed a mathematical / statistics analysis in order to determine the number of trials required to consider a pro-efficient person in the use of fire extinguisher applying the concept of learning curve and based on literature sources.

Results

Collected data using the instrument designed to assess the perceptions and attitudes of students are displayed. Through a semantic differential and following an experimental design "before and after" Paired t-tests are run with a significance level of 10% for mean differences. This is done in order to evaluate whether there was a change in the values produced by the first sampling and re-test. The results are presented in Table 1.

Table 1. Perceptions and attitudes Mean differences t-test Results

Item	Mean Differences	P_value	Decision	Re-test Frequency
The learning curve concept helps to understand how the human being acquires a competency or skill	-0,27	0,031	Significant	88.5% of respondents in the re-test mention being among long and extremely according
He plans to apply the concept of learning curve as a tool to improve academic performance	-0,6	0,000	Significant	60.7% of respondents in the re-test mention being among long and extremely determined, 26.2% mentioned be slightly decided.
Perceived control to properly handle a fire extinguisher to put out a fire when	-0,6	0,001	Significant	45.9% of respondents in the re-test mention being among long and extremely agree, 23% mention be slightly agree.
Self-assessment of activity participation	-1,01	0,000	Significant	78.7% of respondents in the re-test mentioned having an interest among many and extremely good.
The activity contributes to the development of their teamwork skills	-0,6	0,001	Significant	86.9% of respondents in the re-test mention being among long and extremely agree.
The activity contributes to the development of communication skills	-0,68	0,000	Significant	72.1% of respondents in the re-test mention being among long and extremely agree.
The activity contributes to the development of their research skills	-0,311	0,038	Significant	88.5% of respondents in the re-test mention being among long and extremely agree.

The results show that the impact of the activity is highly positive. The values obtained in the re-test were significantly higher for the items expressed in Table 2. The frequency analysis is also usually favorably with values above 80% for the higher levels.

Discussion and Conclusion

The results obtained confirm that the proposal for the development of the learning curve practice contributes to the development of knowledge and enables addressing professional skills such as "life-long learning". In this regard, among other benefits the following can be considered: improved attitudes toward research, strengthening

of the ability to work in team, effective communication, and development of critical and analytical skills in engineering. The activity positively modifies attitudes towards the need to update and develop in students the skills of long-term continuous learning.

In the evaluation of the results various objectives of the activity were reviewed, obtaining in all cases a positive balance by the students and their satisfaction because of their participation and accomplishment. It is visible in the different stages of the experience, the inclusion and apprehension of theoretical knowledge taught in the lecture. Thanks to the simulation of a real learning problem, students were able to recognize the role that "life-long learning" competence plays in their professional work, taking advantage of the situational motivation generated in active learning environments.

This educational experience can be performed as a way of stimulating the development of "life-long learning" competence. By its nature, the concept of learning curve can be virtually replicated to other activities to serve the same purpose, helping to fill the gap that exists in knowledge about the strategies for fostering competition.

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INTE 2014

Building to learn: An educational activity in the experiment on cosmic rays

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Abstract

An educational activity, in which the active share of the students is integral part, has been conducted in the high school “E. Fermi” of Catanzaro, involved in Extreme Energy Events (EEE) project that is the Italian project studying cosmic rays. Like all the experiments on cosmic rays present around the world, EEE uses telescopes assembled by students and teachers in secondary school.

This paper reports the educational activity, in which the understanding of the fundamental concepts of circuit elements, voltage and current, happens through the simple construction of HV box for the MRCP chambers, constituting the telescope for cosmic rays.

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Peer-review under responsibility of the Sakarya University.

Keywords: Experiment; students; school.

Introduction

The school learning is only one of the so many opportunities of formation that is furnished to the students, although the acquisition of some competences often happens out of the school. An important role is developed by the practical activities opportunely harmonized with the theoretical aspects. Thank to the EEE project was possible to take advantage of experimental activities to transfer knowledge in a very natural way. The EEE project is carried out by a collaboration of several research institutes, including Centro Fermi, INFN, CERN and MIUR (the Italian Ministry of Education, University and Research). It is an experiment for the detection of Extensive Air Showers, which exploits the Multigap Resistive Plate Chamber (MRPCs) technology. Essentially it makes use of the standard technique, consisting in detecting the muon component arriving to the ground of the extensive air showers generated by the energetic primaries when they enter the atmosphere. Due to the very high energy of the primaries, the corresponding showers are characterized by section areas of several km².

The experiment is innovative because the detection sites are mostly hosted in Italian high schools scattered all over the national territory, and because the telescope was first built by students and teachers at CERN and then the assembly and commissioning is in the secondary school, always by students and teachers.

With an instrument so complex, the assembling and commissioning offer clearly suggestions for different educational activities. Among the many possible activities, one of type “Renaissance shop”, it has been conducted in the High School “E.Fermi” of Catanzaro, in which was assembled the telescope used for studying cosmic rays. This educational activity permitted to students to understand the base concepts on circuital element, voltage and current by means the simple construction of High Voltage (HV) box for the MRPC chambers, constituting the telescope for cosmic rays.

A brief description of the telescope is required to better comprehension.

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1.1. MRPC description

The telescope is composed by three Multigap Resistive Plate Chambers (MRPCs), characterized by an active area of about 2 m^2 . The MRPCs used, shown in Fig.1, have six gaps obtained by a stack of glass plate spaced $300 \mu\text{m}$ each by means of commercial fishing line, and characterized by a volume resistivity of about $10^{13} \Omega\text{cm}$. The outer glass plates are coated with graphite painting, in order to be able to apply the high voltage and obtain the desired electric field in the gas gaps; when an ionizing particle passes through the gas, it creates a certain number of primary ion-electrons pairs, which are amplified in the usual avalanche process and finally induce a signal on the external readout strips. The gas filling the gaps is a mixture of $\text{C}_2\text{H}_2\text{F}_4/\text{SF}_6$ 98/2, while each MRPC is equipped with 24 copper strips 160 cm long, having a pitch of 3.2 cm. The particle impact point is reconstructed by the hit strip in one direction, and by the signal arrival time difference at the strip ends in the other direction. At the operating voltage of 18 kV, the measured MRPC efficiency is typically 95% and the time resolution is of the order of 100 ps, so that strip dimension, and time differences provide a spatial resolution of about 1 cm in both coordinates. The signals coming from the front-end cards are collected and processed when a triple coincidence of the MRPCs generates the trigger for the data acquisition. The absolute time of each event, necessary to spot coincidences between events recorded at different sites, is obtained by means of a Hytec GPS VME module.

check the cable connections and perform, after explanation, measurements of chamber efficiency.

Later on, during the data taking stage, the students perform the daily checks which are mandatory to keep the system working; how to treat and analyze them, using the very same approach, since younger students work in close contact with more experienced ones in the most natural way.

Almost all the schools, moreover, set up their own EE INFN, where they store all the relevant information about the

Fig. 1.

Description of MRPC chamber constituting the telescope for cosmic rays

Educational activity: Building to learn

The MRPC chambers are, practically, large capacitors, plane and parallel that require high voltage. Not could use power supply that provides directly high voltage, the power supply system of the MRPCs is constituted by power supply of DC voltage, adjustable between 0 and 5 Volts, that provides voltage to special converters DC/DC, which are located in special boxes (Fig.2 and Fig.3). The converters DC/DC used are, EMCO Q101-5 for the positive voltage and EMCO Q101N-5 for the negative one (Fig.4), they multiply by a factor of 2000 the DC voltage applied to the input, so the MRPCs get a positive voltage of about +10 kV and a negative of about -10 kV.

The purpose of this activity, “building to learn”, has been the building of the HV boxes for the MRPCs and then test them, as a learning tool for the students.

This work, first drawing the electrical circuit (Fig.12), then assembling the various elements (fig.5) by understanding the meaning of each of them, has made students more aware and confident, with an increase of self-esteem, especially in those considered to be lazy and less propulsive in the classroom, but that in reality are just unmotivated, only because their way to learn is by practical approach, laboratory activities, and so on.

1.1. Work

Initially, it was explained to the students the operation of the experimental apparatus with the physical principles that are at the base of the same. The attention is focused on the study of the electric circuits and on Ohm's laws. It

is discussed about the operation of capacitors and resistors and about the safety problem because of the use of high voltage. The problem of safety is solved by the use of DC/DC converters inside of the HV boxes for MRPCs. These boxes are made of aluminum (Fig.6) and are internally coated with insulating material (Fig.7), also they are equipped with a connector for High Voltage connected directly to the MRPC chamber (Fig.8-Fig.13-Fig.14) and with two connectors for control of the power supply (Fig.9 (a) – (b)).



Fig. 2
DC/DC converter



Fig. 3
HV Box for MRPCs



Fig. 4
HV box red and blue, respectively
for positive and negative voltage



Fig. 5
Circuit elements and
connectors



Fig.6
Box made in aluminium



Fig.7
Insulating material



Fig.8
HV connector



Fig.9 (a)
Connectors to control
the power supply

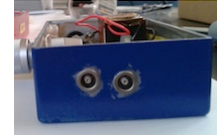
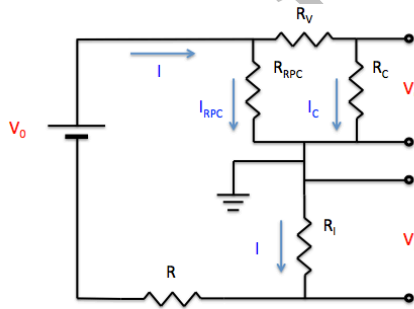


Fig.9 (b)
Lateral image of box,
showing LV connection



$$\begin{aligned} R &= R_i = R_c = 1\text{M}\Omega \\ R_v &= 1\text{G}\Omega \\ R_{RPC} &\gg R_v \end{aligned}$$

Since $R_{RPC} \gg R_v$, the current that flows into R_c is in good approximation equal to I . So

$$I = I_{RPC} + I_c \approx I_c \quad \text{and} \quad I = V_0 / (R_v // R_{RPC} + R_i + R) \approx V_0 / R_v$$

Say that

$$V_c = I_c R_c \quad \text{and} \quad V_i = I R_i$$

And in conclusion

$$V_i - V_c = I R_i - I_c R_c = (I - I_c) 10^6 = I_{RPC} 10^6 \quad (\text{the difference between the two Tensions is proportional to the current that flows into the chamber})$$

Fig.12

Scheme of electric circuit realized inside of the HV box



Fig.13

Box connected to MRPC by -HV connector.

On the left side there are the Low Voltage (LV) connectors (in black and red colors)



Fig.14
Box connected to MRPC by +HV connector



Fig.15
Students during the box building work

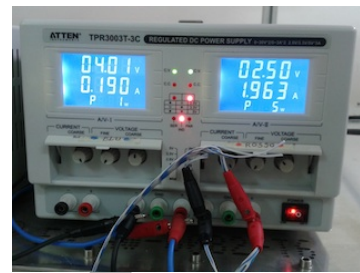


Fig.16
Power supply for LV

Then, under the guidance of an experienced teacher, students, after the discussion on the work to make and on how to do it, and after discussion about the circuit elements operation, they also have drawn the simplified electrical circuit (Fig.12), which was built inside of the HV box (Fig.3-Fig.4). So students have gone to the operational phase, organizing themselves into working groups for the assembly, welding and insulation components operation (Fig.15). Then, it starts the connection of HV boxes to the MRPCs and the consequently test to prove the good work done.

Technical and operational aspect

The interesting aspect is the method of work followed, in fact, are created different work groups... a group of students has analyzed and selected the material and the appliances necessary for the assembly, parallel groups have assembled, respectively, the red HV box for positive voltage and the blue HV box for the negative one. The practical activity, done by students, has been proposed as executive working with the intention of providing to the procedural knowledge. This experimental activity has encouraged students to use the theoretical concepts as a guide in the planning and operational phases. To distinguish the DC/DC converters, the students have colored the HV boxes containing the DC/DC converter for positive voltage in red, and colored in blue the one containing the DC/DC converter for negative voltage. Then, the groups of students have discussed about the power supply system of high voltage of MRPCs (working at voltages applied total of about 20 kV). This system is constituted by power supplies of low voltage (Fig.16), which provide output voltages between 0 and 5V, and by the boxes containing DC/DC converters, which allow the amplification of the low voltage input up to about ± 10 kV. Each MRPC has 2 connectors for high voltage to which are connected the 2 boxes with DC/DC converters. This means that we can feed the MRPC chamber up to about 20 kV. Students have understand that:

- The DC/DC converters used on a chamber are one positive and one negative, because one is for powering the anode (electrode potential greater) and the other for a cathode (electrode at lower potential): the voltage difference is given by the total difference of the two voltages, then in the case where both converters are delivering the maximum possible high voltage has:

$$\Delta V_{TOT} = V_{ANODE} - V_{CATHODE} = +10 - (-10) = +20 \text{ kV}$$
- For the commissioning of the detectors is therefore necessary to have 2x3 HV boxes, 3 red and 3 blue, for the anode and the cathode. It is also necessary to have a number of channels to supply low voltage equal to 6 (0.5 A each), as many converters. Furthermore, it is necessary the material to connect the channels of power converters (i.e., electric cable and connectors such as "banana").

The groups have also discussed about the use of resistors in the HV boxes, permitting to measure the effective voltage applied to the MRPC chamber, and the current absorbed. The LV supply has two independent channels, one for set the values of output voltages and the other for set the maximum current absorbed, separately. It is

possible, therefore, to limit the current absorbed by the chamber. The DC/DC converters allow raising the low voltage input up to about ± 10 kV, and cannot absorb more than 250 mA. After the assembling of the HV box, students have fixed them to the MRPCs, furthermore, during the composition of HV box students have discussed about the fact that the box in addition to the connector for high voltage, has 2 outputs of type "LEMO". One of them is used to measure the voltage that is being supplied to the electrode of the MRPC and the other to measure the current absorbed from the chamber itself. Using the tester and the apposite cable, students have measured these quantities. In this way students have understood the role of the instruments assembled and also the failures made during the assembling phase. Students have prepared a database with the measure of voltage and current, and an excel page with the values of control voltage and current of the MRPC chamber, at which they are connected the HV boxes assembled.

The work done by students is been well done, because the value of voltage and current are acceptable. In fact, the work done respects three important things that it must have:

- Voltage supplied to the MRPCs does not must suffer abrupt changes;
- The current absorbed from the MRPC does not must exceed 50 μ A otherwise the inverter may be damaged. And in that case, it should decrease the voltage supplied and continue to monitor the situation.
- It must check that the currents measured on 2 HV boxes of the same chamber are about the same.

Conclusion

The students are ventured both in practical terms, in interpretative considerations, and proposals for action. The activity has represented a new way to conceive the laboratory: stimulate the design creativity to learn by building. The practical activity has not been conceived as simple executive assignment, but to pursue a procedural knowledge through the planning, the observation, the manipulation, and the discussion. The exploration practice has been guiding element in various phases of planning, realization, and interpretation.

The design of the circuit to be realized, the assembly of circuit elements, the full understanding of the meaning of the work they did, the test of proper functioning of HVboxes produced, all "seasoned" with fruitful group discussions, have made students more aware and confident, with an increase of self-esteem, especially in those considered to be lazy and less propositive in the classroom, but that in reality are just unmotivated, only because their way to learn is by practical approach, laboratory activities, and so on... confirming the importance of experimental activity to improve the learning of scientific topics.

Acknowledgements

Thanks go to the students, teachers and the head teacher of High School "E. Fermi", Catanzaro Lido (Italy), for their participation and work with enthusiasm.

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INTE 2014

Building, language, survey: for an awareness didactics

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Abstract

The built is like a text: it can be read and understood or only read, without making it one's own; the elements that contribute to form the built can be treated as the similar components of the language and, just as happens with the texts, the different composition of the elements leads to even deeply different results. The survey, before being a measurement as detailed and accurate as possible, must be a critical reading that, in the historical built as in the contemporary one, lets us recognize their design processes and formal intentions just through the analysis and understanding of the systematizing of the elements, in order to train aware designers.

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Peer-review under responsibility of the Sakarya University.

Keywords: perceptive impact; critical reading; image; knowledge; process; language; shape; awareness

Introduction

You could define the theme according to certain keywords that can be seen just as an outline for the development of the research, since they touch on organically related topics, although belonging to different fields: perceptual impact, critical reading, image, knowledge, awareness, process, language, form are some of the possible examples of concepts that are part of the deep work of systematizing and making the system of a method not only of transmitting knowledge, but even more of transmitting the consciousness of the individual designer. So educating for awareness, preparing architects who are technicians, but, at the same time, attentive readers and interpreters of the reality that surrounds us; to achieve this aim you must employ all the necessary skills, ranging from the knowledge of civilization to the history of the place - considered both in a strict sense and relating to the building traditions -, but above all you must learn to systematize what can be defined as 'active constants' of the residential built, according to a processing vision, that does not stop in the past, but looks to the present and turns to the future.

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Fig. 1. Narrow alleys and open squares in Genoa.

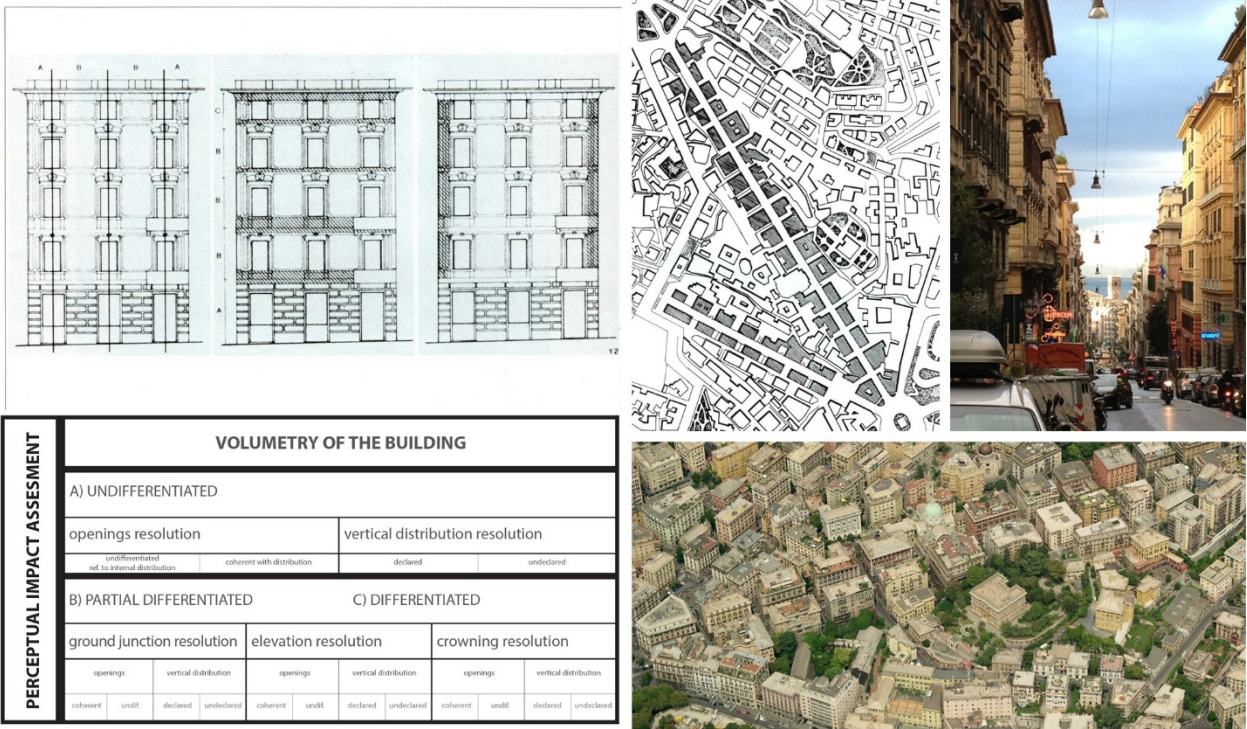


Fig. 2. Assarotti street perceptual impact assesment.

2 Reading the built as a text

This is visual perception, since the suggestion itself derived from views that also appear very different leaves impressions that often correspond to other changes with many other references of time, of living models, of socio-cultural realities. As an example, it is sufficient to make a reference to the areas of an urban core (the example taken here is that of the city of Genoa), which correspond to different building moments; the first, immediate impression is the one that derives from the specific image of the built identity of each historical period. So it can also become extremely simple to describe, objectifying it, a visual sensation: narrow-wide, monochromatic-polychromatic, for example, indicate clearly and effectively not only the quality, the look of a built environment, but also the relationship linking the context itself to others. The essential tool to educate for a critical reading is Representation. It can be both, design - prepared no matter in what form and with what tools and techniques - photography, video or whatever else, because it is from the representation of the perception that you have of the built that you must start, releasing it as much as possible, from subjective interpretations.

A designed, photographed from above, measured city shows very different characters, depending on the building organization, with identifiable elements that are affected by various constraints, as it is evidenced by the view of parts of Genoa that accompanies this text.

In fact in the presented images, made from aerial photographs and maps of elaborations of Genova, (from San Vincenzo street to Colombo square, Assarotti street and Vittoria square, as well as the façade relief of Assarotti street and Vittoria square and the view of Caricamento), it is easy to read the above statement, even for someone who is not an engineer or an expert in architecture. In Genoa the Middle Ages offer fast-paced, narrow passages and caves, monofacing buildings and blocks in linear series; the Renaissance offers palaces of internationally recognized characters filtered through repeated patterns and consolidated on ways as wide and regular as possible; the Nineteenth experiences the gap between the outside and the inside to keep alive the characters of the residential architectures representative of the previous period, even in the absence of the same social class that had produced them and in the presence of multifamiliar apartment buildings, only 'mimicing' the palace.

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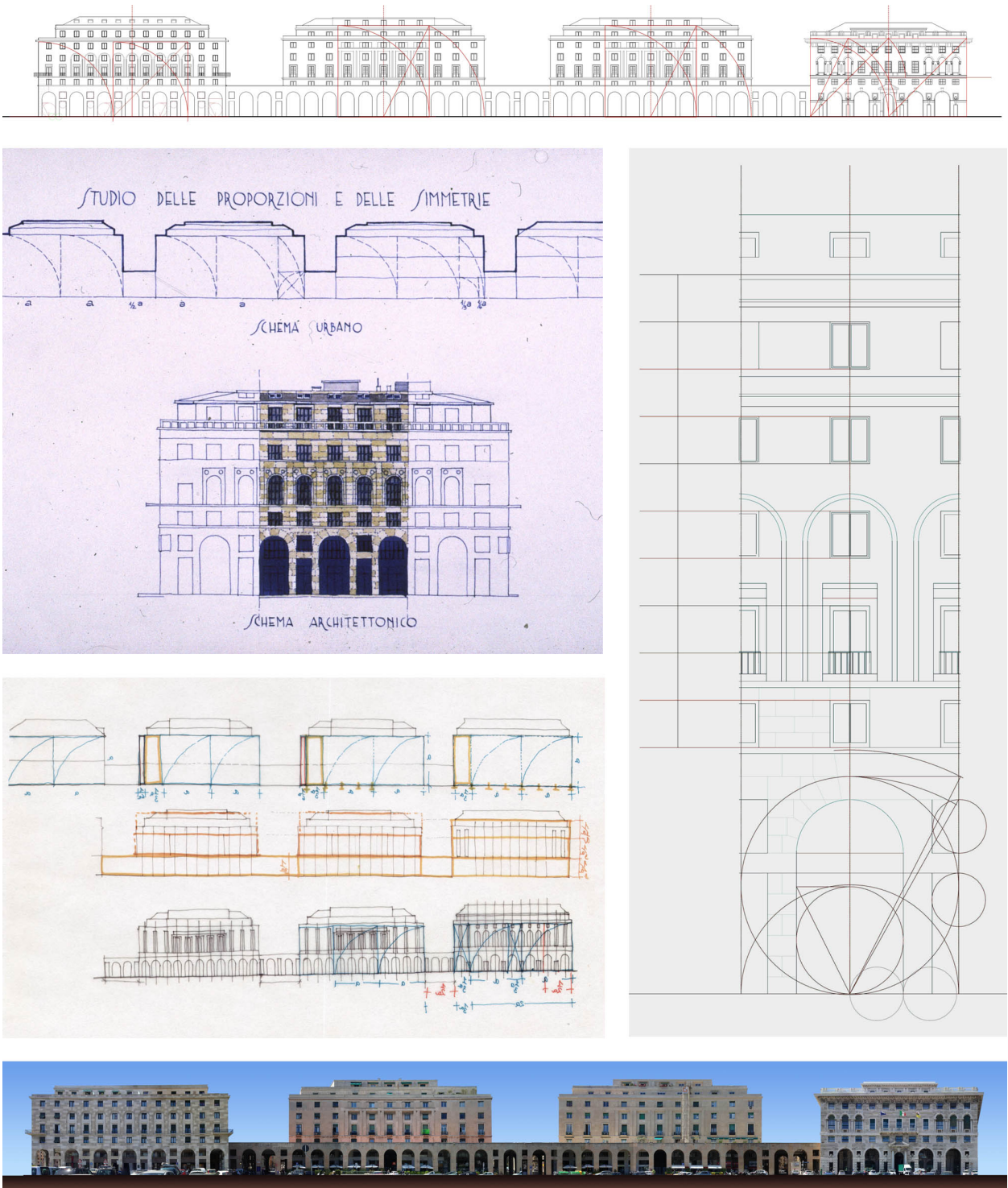


Fig. 3. Vittoria Square buildings survey.

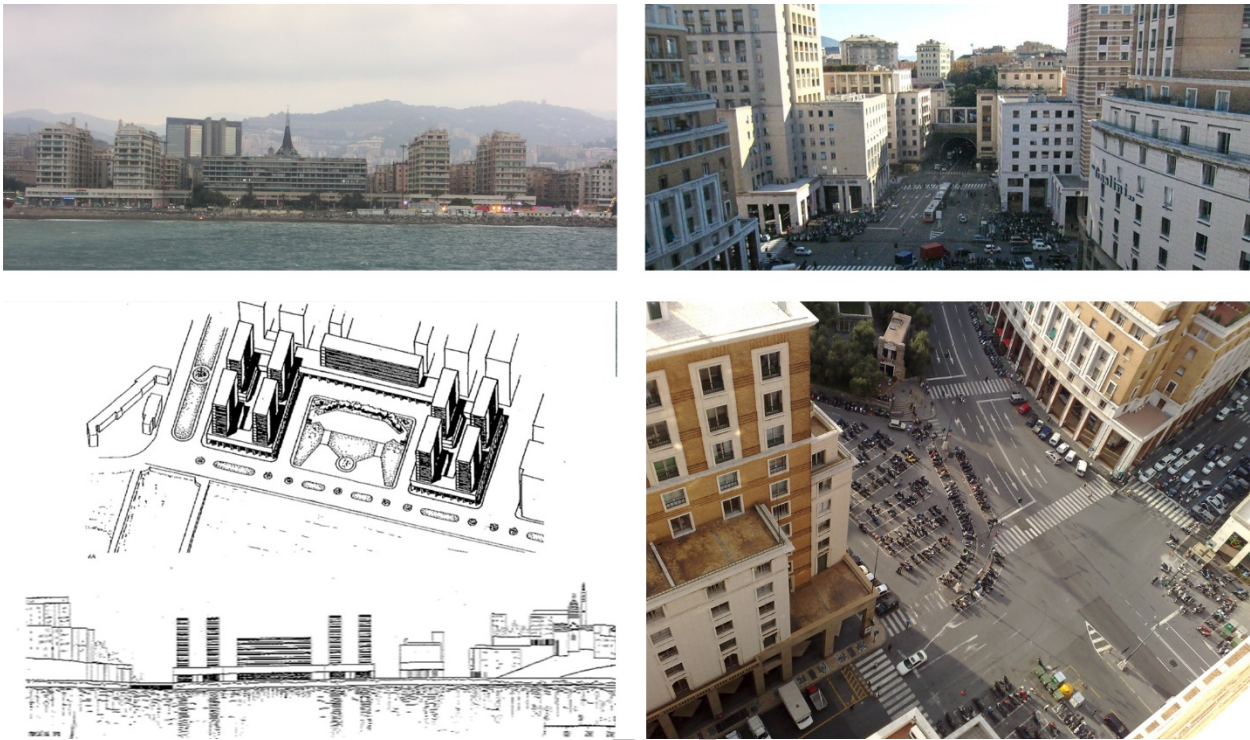


Fig. 4. Examples of modern architecture, Rossetti (left) and Dante (right) Squares.

It is still worthwhile, here, to highlight the components, which make it possible to attempt to maintain the exterior of the houses anchored to the nineteenth-century stately homes, for their value in terms of diffusion and the formulation of models; these components can be summarized as follows:

- rhythmicity of the wall;
- axis of symmetry;
- hierarchy of plans.

Then reading the image of the built, according to the elements that led just to that facies and that go beyond the models and temporal meanings, reading what is behind the appearance of a building structure is essential. According to this hypothesis, through the development of a search that starts from the texts of Gianfranco Caniggia, we arrived at proposing a method of recognition of the objectivable elements in the formal outcome of a building, directly connected to the relationship linking the appearance to the substance of the building itself in search of a perceptual impact assessment.

The materials, structures and use are the transversal components; the junction on the ground, the elevation, the crowning, the essential elements; the formal resolution of windows and passages from one element to the other are the main nodes in the project. The resolution of the whole is what you perceive and varies according to the correspondence more or less direct and consequential of the possible choices.

This was the ambitious content of the doctoral thesis research in relief and representation, discussed by me at the time, which aimed precisely at making as objective as possible what is normally understood as a subjective impression; the applicability of this method was summarized in the preparation of a form to fill out, which proposed the headwords listed so far, the components of the architectural language of the residential building with historical basis.

The form takes into account the outside volume of the building, but putting it in relation with the interior of the building, so as to highlight any discrepancies or differences of formal expression; the case in point, a real 'gym' for the exercise of critical reading of the built environment, is the Nineteenth century, which, as mentioned before, often sacrifices the coherence between the exterior and the interior design in favor of a 'facade', which focuses on the outward appearance above all. This makes it possible, then, to find a clue to the many 'isms' of the history of architecture, structuralism, functionalism, and so on, that force the perception through the exaggerated use of an item, at the expense of others.

It is clear that the greater the design intent is, the greater the gap between the various solutions will be, the greater the authorial contribution and the smaller the choice uniqueness.

Critically understanding our environment allows us, ultimately, to assess how intentionality can affect design and, therefore, the construction of a building and what this means in terms of removal of the common local experience, as well as the genius loci. It also means - and perhaps above all - not to consider the ancient heritage either as a suggestion or as an untouchable heritage in contrast with the contemporary one, but to perceive the possibility of a transforming continuum.

In conclusion, it should at least report how, as well as for contemporary residential buildings, it is possible to maintain the same method of critical reading, based on the analysis of the three components (materials, structures, usage) required to reach a formal definition and how it is precisely the specific relationship between those components- inside them and in relation to the overall design of the building- that leads to the formal variations also substantial that we can all perceive from the report. The evaluation form of perceptual impact, once again, may prove useful to critically read the volume, identifying the specific points of interest that is the possible vertical stratification, the treatment of the openings, the recognition from the outside of the vertical distribution mechanisms.

The contemporary examples are numerous and varied: here the Genoese aspects are always proposed and in particular Assarotti streets, Colombo square and finally Vittoria square.

Residential ancient built and contemporary one, therefore, continue to belong to the same field of conceptual references and from this step designers must and can find ideas and suggestions for a design that, while preserving the individuality and authorship of the individual trader, does not forget and denies the context it belongs to.

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Calculus & GeoGebra, an interesting partnership

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Abstract

In engineering careers, the study of the Differential and Integral Calculus begins in the first course of Calculus. In order to understand the definitions and theorems involving such contents, students need to handle symbolic and graphical representations.

With GeoGebra, it is possible to create different interactive applications that can be used as teaching tools to illustrate math classes. In this paper, some animations of the fundamental concepts of Calculus are shown, emphasizing the analysis of their geometric interpretations. These tools were designed for the Calculus I course at the Facultad Regional San Nicolás, Universidad Tecnológica Nacional, Argentina.

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Peer-review under responsibility of the Sakarya University.

Keywords: GeoGebra; Calculus; Definitions

Introduction

As today's students were born in the digital era they interact with technology since childhood. If teachers want to keep up with their students in order to engage them with the content they need to learn, their teaching strategies need to be adapted to their students' lifestyles (Arteaga Sánchez, Cortijo, & Javed, 2014). However, a significant discrepancy is still noticed between the potential of information technology to contribute to meaningful learning of mathematics; in generating positive attitudes among students therefore facilitating active learning, and the use made of these resources in regular classes.

Within the basic training of a future engineer, mathematical knowledge plays a very important role and teachers must pay close attention to their way of teaching. Furthermore, Calculus, which deals with quantities approaching other quantities, is a dynamic subject. Teaching and learning Calculus is even more difficult when only static images are used, no matter how good they are.

Mathematical visualization is the process of forming images (either mentally, or with pencil and paper, or with the aid of technology) and using such images effectively for mathematical discovery and understanding. To achieve deep understanding, visualization cannot be isolated from the rest of mathematics. Students must learn how ideas can be represented symbolically, numerically, and graphically, and to move back and forth among these modes (Zimmerman & Cunningham, 1991). For example, students usually need to transform equations into Cartesian graphs. This kind of transformation is called "conversion". From a didactical point of view, only those students able to perform conversions do not confuse a mathematical object with its representation and can transfer their mathematical knowledge to other contexts different from the one of learning (Duval, 1999).

In order to allow students to approach the mathematical concepts studied in a first course of Calculus, diverse GeoGebra Applets were designed, coordinating graphic and symbolic forms of representation.

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The aim of this paper is to show some animations of the fundamental concepts of Calculus, emphasizing the analysis of their geometric interpretations. These tools were designed for the Calculus I course at the Facultad Regional San Nicolás, Universidad Tecnológica Nacional, Argentina. It is possible to use or download the Applets by clicking on the resources button (Recursos, in Spanish) on the research group website, www.frsn.utn.edu.ar/gie.

The GeoGebra Applets Description

GeoGebra is a free software that brings together geometry, algebra and calculus allowing diverse representations of mathematical objects. Points, vectors, lines, conic sections and functions can be graphed and then dynamically modified. It is also possible to find derivatives and integrals of functions and to identify its singular points. GeoGebra is a practical easy-to-handle tool, which brings the possibility of creating learning objects that can range from simple graphs to dynamic web pages. GeoGebra is available from www.geogebra.org.

To facilitate the visualization of the concepts taught in the course the following Applets were prepared.

1. Limits

The definition of the limit of a function $f(x)$ as x approaches x_0 is:

$$\lim_{x \rightarrow x_0} f(x) = L \Leftrightarrow \forall \varepsilon > 0, \exists \delta = \delta(\varepsilon) > 0 / 0 < |x - x_0| < \delta \Rightarrow |f(x) - L| < \varepsilon \quad (1)$$

To visualize the geometric interpretation of (1) an Applet was prepared. This Applet contains a slider which renders the definition, which expresses the fact that “for all x which lie close enough to x_0 , $f(x)$ lies as close to L as desired”. Steps 1, 2 and 3 show how, for a determined neighborhood of L , a neighborhood of x_0 is determined. The remaining images illustrate how $f(x)$ in the neighborhood of x_0 , belong to the neighborhood of L . Fig. 1 shows the last step.

A similar Applet, for sided limits, was also prepared. Fig. 2 shows the last step for the definition of left side limit.

In the Calculus I course, the concept of infinity appears for the first time in the study of limits. Learning problems arise quickly when analyzing infinite limits. Two Applets were prepared showing geometric interpretations of the infinite limit for finite variable (2) and the finite limit for infinite variable (3).

$$\lim_{x \rightarrow x_0} f(x) = +\infty \Leftrightarrow \forall N > 0, \exists \delta = \delta(N) > 0 / 0 < |x - x_0| < \delta \Rightarrow f(x) > N \quad (2)$$

$$\lim_{x \rightarrow +\infty} f(x) = L \Leftrightarrow \forall \varepsilon > 0, \exists M = M(\varepsilon) > 0 / x > M \Rightarrow |f(x) - L| < \varepsilon \quad (3)$$

The same Applets are used to define horizontal and vertical asymptotes respectively. Figures 3 and 4 show the final step of each animation.

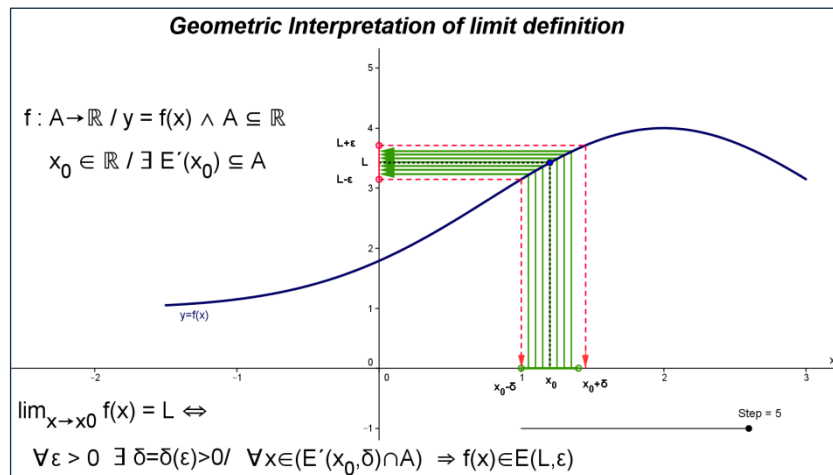


Fig. 1. Geometric interpretation of ordinary limits.

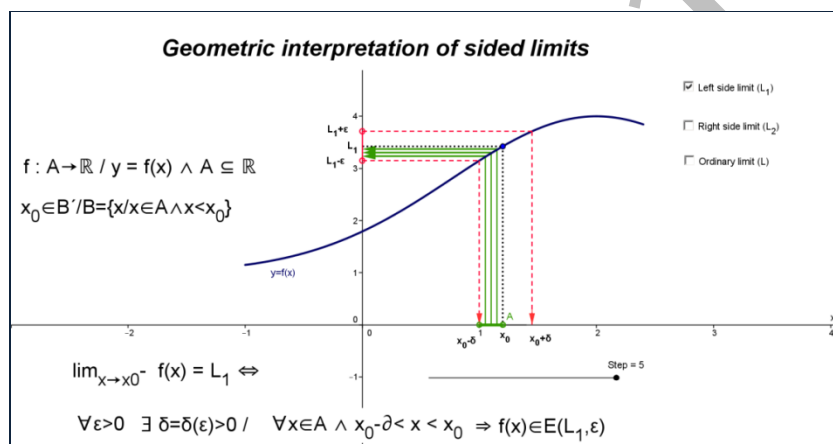


Fig. 2. Geometric interpretation of sided limits.

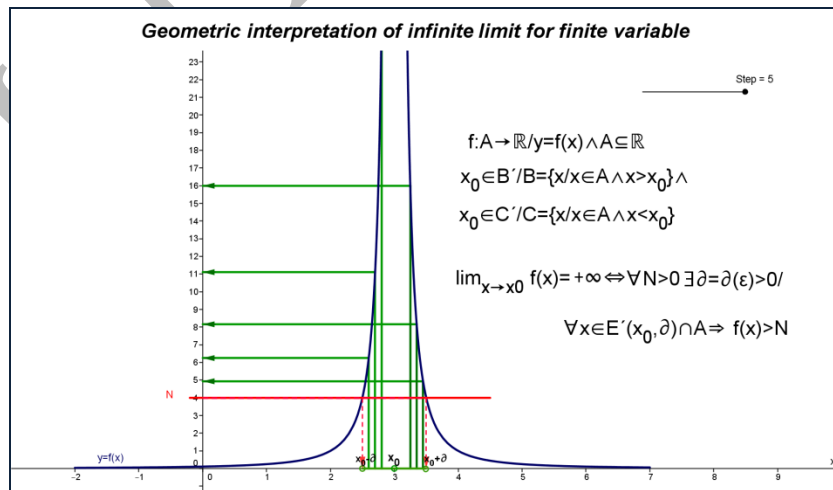


Fig. 3. Geometric interpretation of infinite limit for finite variable.

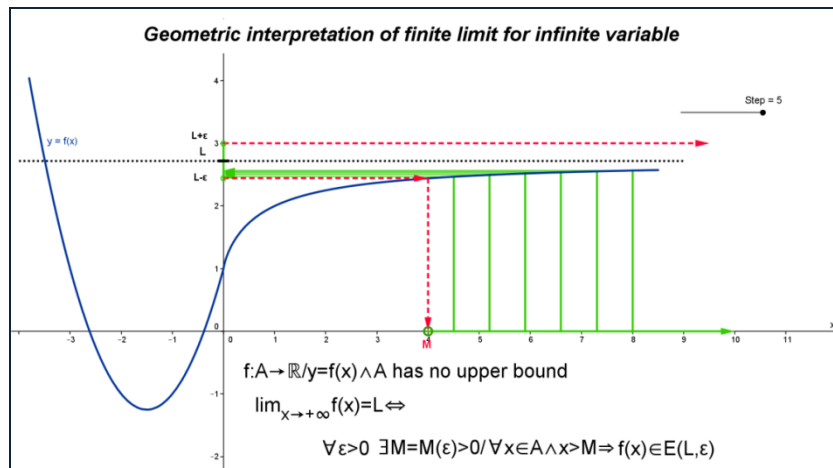


Fig. 4. Geometric interpretation of finite limit for infinite variable.

2. Derivatives

An Applet was designed for the geometric interpretation of the derivative of a function at a point x_0 , Eq. (4)

$$f'(x_0) = \lim_{h \rightarrow 0} \frac{f(x_0 + h) - f(x_0)}{h} \quad (4)$$

The slider in this case is the value of h approaching zero, both positive and negative h . The purpose of this Applet is to show how the slope of the secant line approaches the tangent line as the value of h tends to zero. Fig 5 presents an intermediate graphic of the animation.

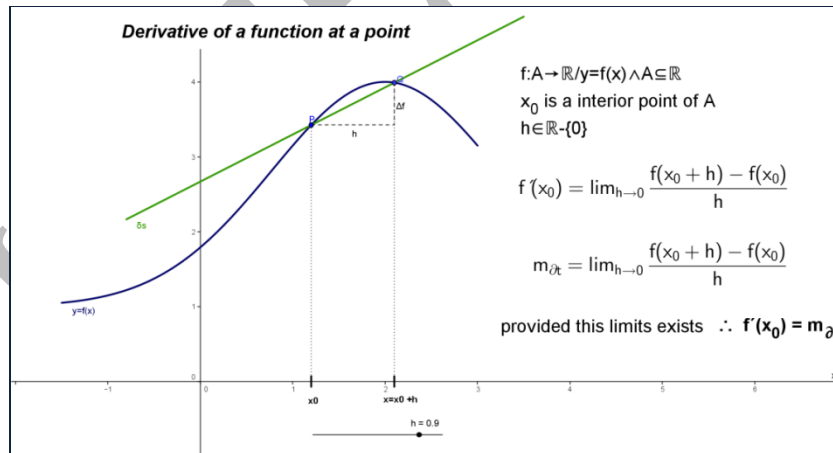


Fig. 5. Derivative of a function at a point.

Fig. 6 shows the Applet prepared for the generation of the derivative function. It contains a slider representing different points x_0 in an interval of the function domain.

The graphics show a function and, as x_0 changes, the corresponding tangent line and the value of its slope at each point using a dynamic text, and emphasize that the slope value at each point corresponds to the value of the derivative function.

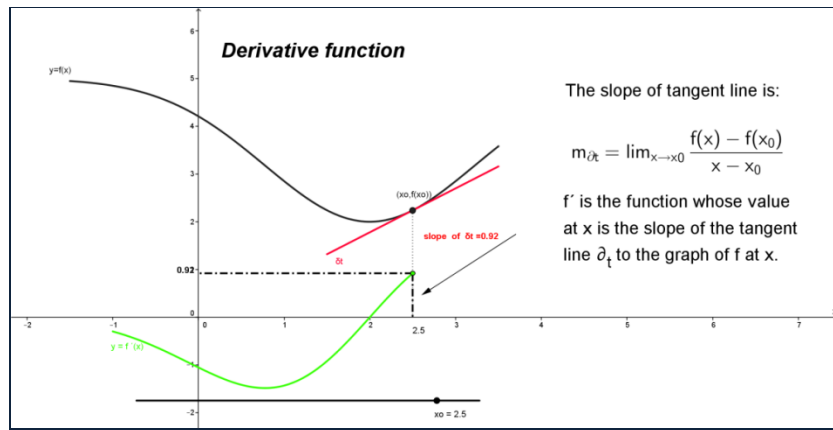


Fig. 6. The derivative function.

3. Integrals

Figure 7 shows the geometrical interpretation of the definition of the definite integral. This is usually one of the most difficult to address from an educational point of view, because of its complexity. For this reason, it is common to find in textbooks a very simplified version of it, presenting only the case of a partition with intervals of equal length.

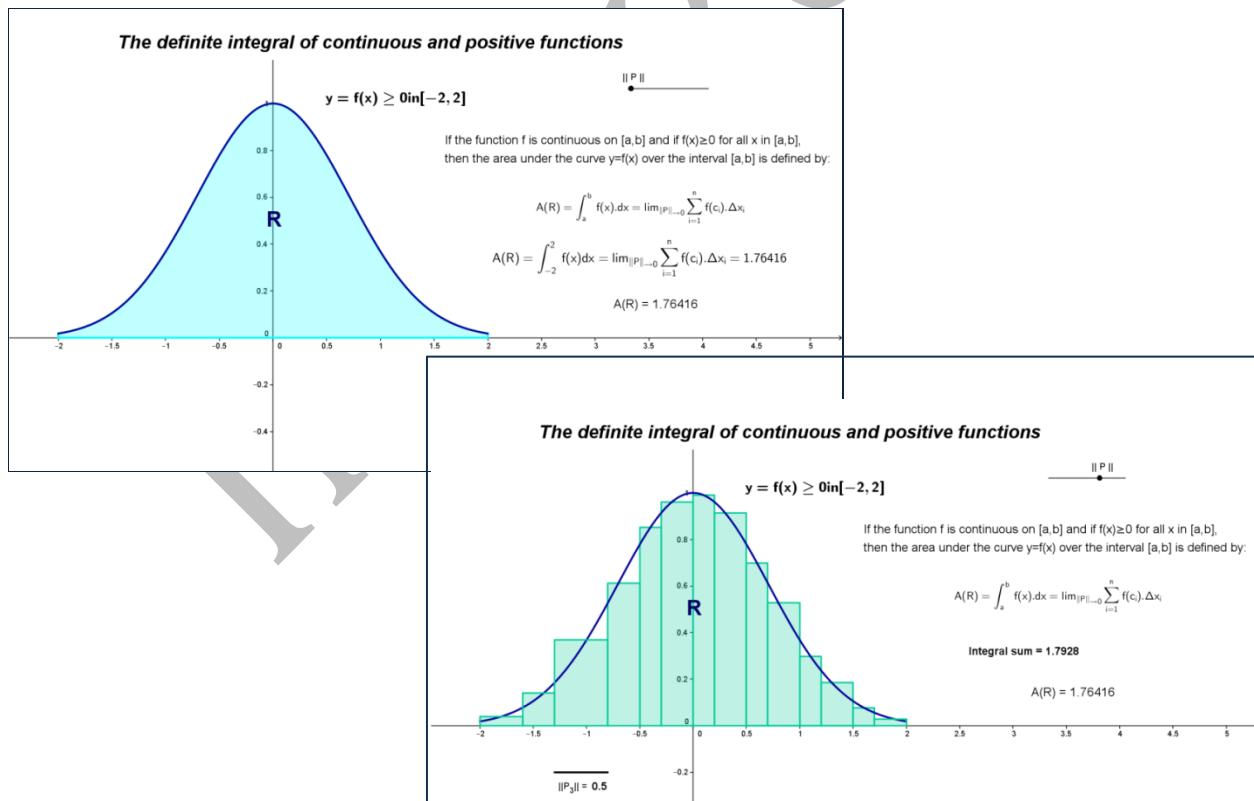


Fig. 7. The definite integral definition.

The Applet shown in Fig. 7 may be used to present the most general case of Riemann sums, with a generic partition of the interval of integration. As the norm of the partition goes to zero; the integral sum is approximated geometrically and hence in numerical value by dynamic text, to the area under the curve $f(x)$, since $f(x) \geq 0$ over the interval $[a, b]$.

Another concept that students generally find complicated is the integral function. It is not easy for them to assimilate that the variable of the function is in the upper limit of an integral. Fig. 8 shows an Applet that illustrates that the integral function depends on the upper limit of integration, and how it is constructed while this value changes. It also shows, through an interactive text in the bottom, the relationship between the integral function and the area under the curve $f(x)$, in case that the function of the integrand is positive.

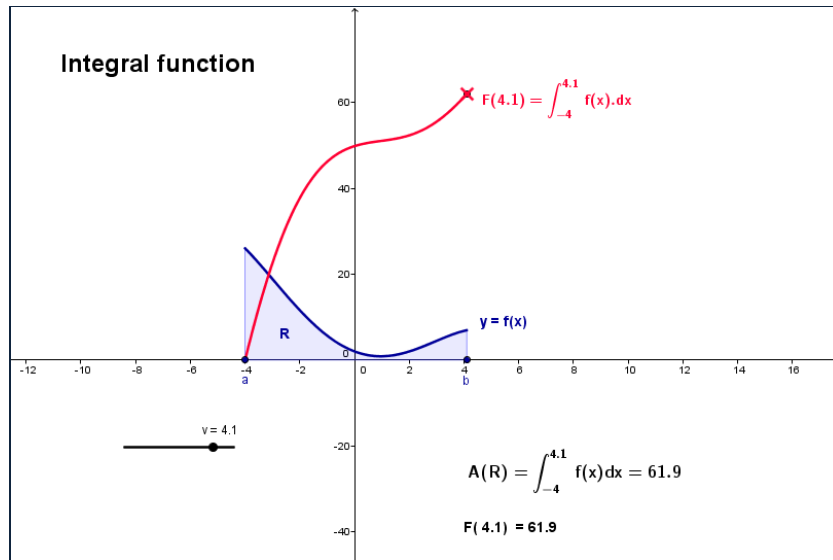


Fig. 8. Integral function.

Conclusions

The graphics in books, as well as on the blackboard, are static and require students' imagination adequately trained. When thinking about teaching strategies to discuss the fundamental concepts of Calculus, both its dynamic characteristics and the study of change and movement, have to be kept in mind. Nowadays, the existence of free programs with versatile capabilities and interactive representation helps to improve the presentation of content taught in this area of knowledge, allowing dynamic visualization. Thus, certain conversions of representation between registers, which allow students to approach the mathematical concepts, are propitiated.

In conclusion, the incorporation of the GeoGebra Applets, and the teaching situations arising therefrom, is a much more effective teaching methodology than traditional one to facilitate the learning of the fundamental concepts of Calculus I at the Facultad Regional San Nicolás.

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INTE 2014

Causal attributes of university students and their preferences in the process of evaluation of their learning activity results

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Abstract

University training consists of several activities. One of the main activities is evaluation of its results. Integral part of the assessment is examining students' knowledge. This process is demanding not only from the position of the student, but also of his/her teacher. Verification represents a specific system of diverse methods, forms and means, where the teacher is the decisive factor in their choice. Whether the choice is suitable or not, it is therefore reflected in the quality of the process and it also affects its outcome (which is the student's success or failure). To see the cause of failure or success is a factor that greatly influences the university student's motivation and choice of learning strategies. However, the same process provides the university teacher with feedback of the assessment process. Information that teachers receive may help them to improve their teaching activities. In conclusion we present preferences of causal attributes of students' success or failure in the process of knowledge testing.

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Keywords: causal attributes, university student, university teacher, results evaluation, knowledge testing

Causal attributes of university students

The method of causal attributes in university learning isn't considered a traditionally used method. The essence of the method lies in determining the attribution of causes of a student's achievements or failures in the process of assessment of his/her study results. Understanding the attribution of causes of success or failure is important mainly in the area of advancement of a student's motivation. Humans naturally attribute the cause of success to themselves while searching for causes of failures somewhere else. M. Zelina (Zelina, 2011) states the following division of the map of causal attributions:

- * internal and reversible causes, e.g. diligence – it is an internal personal matter and diligence can be reversed.

We talk about an internal reversible localization of causes of success or failure,

- * internal and (relatively) irreversible causes, e.g. fate,
- * external and reversible causes, e.g. "I didn't have a book for study",
- * external and irreversible causes, e.g. "it was a difficult task for me".

One technique for the change of attribution of causes is the re-localization of causal attributes of successes or failures. In simpler terms we can say that the attribution of causes to oneself is a functional localization. Others are less functional and the attribution outside oneself is the least functional localization. A dysfunctional localization must be, first of all, recognized. In the next phase, we need to determine if it is a fixed, localized or coincidental (only in this case) causal attribution. Based on the understanding (diagnosis) and the differentiation (differential diagnosis) we can apply a program of adjustment of causal attribution in situations of dysfunctional localization. In praxis, two techniques are commonly used for re-localization of causal attributes. The first

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technique is to explain to the student that the attribution of causes is unfitting and that it impedes his/her progress and demotivates his/her self-advancement. This is a method of clarification or suggestion and a method of a change of attitude. The second tactic, and it seems to be the more effective one, is a change of localization through activity, through practice. In reality it means to give the student tasks, through which he/she ascertains that the success is only in his/her hands, the causes are within him/her and that they can be reversed by his/her own work and attitude.

While applying the method of causal attribution it is, however, often revealed that the real causes of students' failure can be found in the forms and methods of assessment of their learning activity as well as in the actual verification of students' knowledge and abilities during the exam period.

2. Forms and methods of evaluation in university education

Expertise, pedagogical readiness and the moral profile of a university teacher should guarantee the maintenance of a high standard of the process of evaluation. When evaluating student's results a university teacher should adhere to certain principles, which should naturally arise out of his/her erudition, pedagogical-psychological readiness and mirror his/her personal qualities. As early as 1987, R. Štefanovič (Štefanovič, 1987) defined the general principles for the process of evaluation, examination and classification of educational results of a university student. These are the principle of objectivity, the principle of resolution, the principle of systematic approach, the principle of difficulty and the principle of individual approach. Despite being designed in the past, these principles find their justification in the evaluation process of university education even today. If we wanted to expand the principles of evaluation, surely we should add the principle of evaluation complexity or the principle of evaluation openness. However, it is not our aim to elaborate on the theory of principles, but rather to introduce traditional forms and methods of evaluation and to point out the options for their innovation. The choice of a method depends partly on external factors which are out of a teacher's influence. First, it is the number of students the teacher works with during a semester and which must at the end be evaluated. In the current trend of a continuously rising number of students accepted for study, teachers traditionally choose a written form of examination, mainly didactic tests. Didactic tests are modern means for determining both the quantity and the quality of learners' knowledge. One of the alternatives is the objective test. I. Turek (Turek, 2008) defines the objective test as a test where each item contains only one correct answer. When drafting an objective test, however, one must maintain the following rules:

- from the goals of different study units that are to be evaluated, the teacher compiles a list of achievements students should be able to manage. These achievements represent the area to be examined,
- from the content of study units, the teacher compiles a list of acquirements that should be contained in the above mentioned achievements,
- a chart of relative importance should be compiled from these two lists, the number of test questions that would be created for each item is established based on this chart,
- in the last phase, the test questions are created, in this case they are usually a type of multiple choice questions, where the student is forced to choose only one correct answer from a choice of multiple pre-set alternatives. Creating an objective test is much more difficult than creating a choice of questions in a standard written exam, where the student answers the questions using his/her own words. The number of questions is much smaller in this case and the teacher's ability to examine the whole range of a student's knowledge is limited. We could argue, as was also stated by E. Smetanová (Smetanová, 2010), that in a standard written exam the teacher is able to probe the whole depth of students' knowledge, but by choosing questions appropriately this can be accomplished even in the objective test.

Written examination has its advantages and disadvantages. The advantage of written exams is in the possibility to quickly and at once examine the abilities of a relatively large number of students, under equal conditions, to quickly mark them and to be able at any time to return to the written records if a need should arise. The subjectivity of the evaluation is minimized. On the other hand, written tests don't allow the teacher to watch the student's immediate reaction, his/her approach as well as the process of solving the task. What's missing is the ability to uncover the real scope of the student's knowledge, for example through additional questions as in an

oral examination. The student is not encouraged to improve his/her scientific argumentation. The teacher often finds out later on that the student is unable to correctly formulate a question or take a stand on the solution to an issue despite achieving great marks in a written test. This type of examination encourages mechanical learning and the student is then unable to synthesize the acquired knowledge from multiple subjects when solving a practical, real-life problem. As mentioned by K. Novakova and S. Letavajova (Nováková & Letavajová, 2008), critical, logical and creative thinking, essential for fulfilling the graduate profile and performing his future profession, is thereby not developing. Critical, logical and creative thinking, which are all important faculties of a successful professional, are not being developed. If possible, teachers therefore should prefer oral examination. In its first stage oral examination has an individual character based on a continuous speech of a student. The second stage becomes a dialogue between the examiner and the student on the chosen subject. The advantage of oral examination is that it enables the teacher to correct and direct the answer, to watch the ability to express ideas as well as the sequence of thoughts and the ability to be creative when offering solutions to a given problem. The disadvantage of oral examination is in its inability to offer an exact record of the process of examination. Also, the evaluation and classification could be influenced by a certain level of subjectivity. It is the character of the examiner that plays a dominant role in this type of examination and following classification. His/her expert and pedagogical erudition combined with his/her moral qualities should guarantee the correctness of the examination and classification process. According to students, however, this is not always the case. Some teachers are subject to various momentary moods and external forces. As a result the examination and classification become subjective rather than objective.

And last but not least, in the process of examination a teacher should also use the method of practical examination. In general, practical examination is a method in which the student's knowledge is assessed via practical activities. The content of a practical examination should be the creation of a certain object, a lasting creation – a product of the student. A seminar paper, report, credit paper or a diploma work are also considered products of practical activity. A seminar paper enables the teacher to form a realistic picture not only about the student's knowledge base but also about his/her ability to apply the theoretically acquired knowledge into solving a given or chosen problem. The practical examination, however, shouldn't involve only writing seminar papers or reports. In the process of practical examination it is necessary to concentrate more on evaluating the development and the level of student's skills, abilities and habits, or in other words the competencies outlined in the graduate's profile. Today, however, this part of the examination process is not being realized sufficiently because of a high number of students in study groups and classes and because the process of examining the development of competencies is quite demanding in terms of space and time as well as the technical and material requirements.

In light of the innovation of forms and methods of evaluation, it is necessary to ponder the question of the development of competencies in a student's personality. As we stated before, university teachers often use practical examination mainly via evaluation of students' seminar papers. However, in this context, it is necessary to evaluate not only the seminar paper itself, but also its presentation, through which the teacher is able to assess not just the written expression of the student but also his/her oral and communication abilities, the level of his/her expert or scientific verbalization as well as his/her creativity, emotional presentation and finally the student's attitude toward the subject or the study itself.

Another suitable method for evaluation of the development of competencies is the creation and evaluation of portfolios. J. Slavík (1999) says that the portfolio is a set of student's works produced over a certain period of time, which offer various information not just about the student's knowledge, but also about experiences from the working progression. The portfolio consists of various written works starting from seminar papers all the way to opinions about given expert or scientific topics, final projects, observation protocols from graduate's practical training and their own interpretations of problems being taught or discussed. Various comments of teachers, colleagues, teacher-trainees, lab technicians and so on can also be a part of the portfolio. The portfolio absorbs and stores diverse information about the development and progress, or stagnation of the student's personality. Evaluating a student's portfolio is a demanding task and in the environment of university education it must fulfil four basic conditions. The first of them is the setting of tasks and criteria for evaluation of portfolios. The creation of a portfolio is possible only if this condition is satisfied. Based on appropriately set targets and criteria the university teacher directs the creation of a portfolio and limits the influence of subjectivism during the process of

its evaluation. The second condition is the assignment of the type of works that the portfolio should consist of, the frequency of creation and placement of materials into the portfolio and the determination of who may comment on the student's materials. Another condition that should ensure correct pedagogical evaluation of the portfolio is the complexity of created criteria for evaluation, through which we assess the overall development of the student in all aspects of his/her personality, in other words in terms of the development of necessary competencies. The last condition is the final discussion of the results of the portfolio evaluation with the student. It is necessary to explain the information about the level of the student's personality development to the student and thus direct his/her further study in terms of optimization of the process of self-study and of improvement of his/her work in class or in practical training. The evaluation of the portfolio enables the teacher to penetrate deeper into the student's personality, his/her progress in study, helps to develop the student's self-evaluation skills and to plan the student's own educational work and the educational work of the teachers.

While discussing the question of the innovation of the methods for evaluation of students' educational results, we need to become aware of the fact, that today autonomous evaluation is not being used sufficiently by university teachers in Slovakia. As stated by E. Frýdková (2010), because future graduates will in their professional lives use, besides others, axiological processes, it is necessary to adequately develop these processes in the student's personality. Autonomous evaluation is one of the options for optimal development of these processes and it is also a way to contribute to the general self-awareness, self-evaluation and self-reflection in a student's personality. Autonomy comes from a Greek word *autonomos* and it means self-government, in a broader sense self-support, independence. Autonomous evaluation requires trust in the ability of self-evaluation, evaluation of a student's own work and its results. There are, however, several problems associated with the introduction of autonomous evaluation into university education. A university teacher can trust the students' self-evaluation abilities, but due to a limited use of self-evaluation (at all levels of education) it is questionable how well this ability is developed in students' personalities. When introducing an autonomous evaluation into university education, teachers need to adjust their working methods so that the autonomous evaluation can also be used in class. J. Slavík (1999) states that when introducing autonomous evaluation into education, it is necessary to concentrate on two main dimensions of preparation. The first one is a knowledge dimension which helps to prepare students for informed analytical self-evaluation. It is, therefore, important that the teacher teaches the student correct axiological procedures of his/her own work and its results. The most suitable method is the formative evaluation, which enables a university teacher to gradually teach students to set themselves suitable targets and criteria for self-evaluation based on a process of looking for his/her own mistakes and of the correct perception and evaluation of these mistakes. It is necessary to teach students to see their own mistakes as a means of further progress and not as a means of a teacher's criticism. If, in the first phase, the student finds his/her own mistakes with the help of the teacher, in the second phase he/she is able to give himself/herself feedback with an aim to prevent the mistakes in the future. The first phase can thus be perceived as a sort of a training in the evaluation of students' own work and its results, the second, psychosocial, dimension requires the teacher to create a positive atmosphere in class. It is very important that the teacher creates an environment of mutual trust, cooperation and collegiality with an emphasis on respecting human differences and individualities which also requires a change in the methods of educational work. The teacher, in fact, performs a sort of training in social behavior of students with an aim to develop emotional, social and creative sections of students' personalities. The target of autonomous evaluation is not only to teach students to evaluate their own work and its results, but also to search for ways of improving it, of achieving better results, which in the long run results in the development of a student's personality itself (Kumorová, 2012). Sooner or later a graduate leaves the school and its teachers and will be put into the role of an assessor not only of his/her own work, but also the work of colleagues or subordinates. The improvement of a student's self-evaluation skills is thus an important precondition for his/her future professional performance which largely influences his/her professional and personal life, surrounding environment as well as society at large.

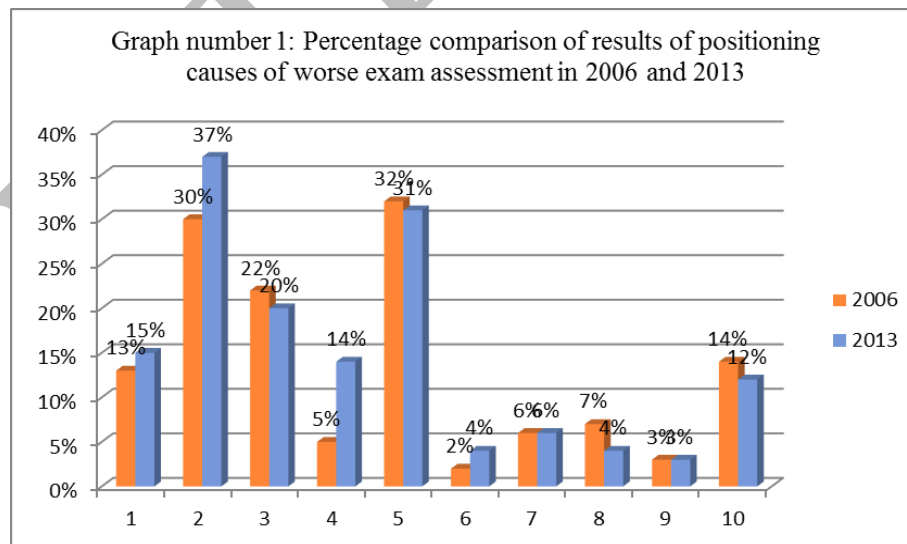
3. Preferences of causal attributes in the process of evaluation of learning activity results

The most common and perhaps the most often used method of verification of knowledge in university learning has been the oral examination. This method is keeping its firm place in the process of evaluation of students' results even in the current situation of an ever growing number of students in study groups. Oral exams are characterized by several peculiar features. One of them is the fact that the teacher has a relatively short time to assess the level of knowledge, abilities and habits that a student had acquired and developed over a relatively long time. Also, despite using objective means of assessment, the teacher is the final and determining agent of the assessment and the results of the assessment may, to a certain point, be distorted by subjective influences. Finally, the overall result of oral examination may be influenced by the momentary disposition of the student. The time of the exam is not always optimum for the best mental and cognitive disposition of the student. This is the reason why most of the time students substantiate a given assessment by momentary disposition or indisposition.

Once again we have used questionnaires to collect students' opinions of the process of assessment during an oral exam. We were interested, as was the case in 2006, in reasons for failure as well as what students consider the main reasons for success or for gaining excellent marks. 112 respondents took part in the survey - they were students of the first and second year of bachelor study program and students of the first year of masters study program. In the questionnaire they were (on the scale from always, usually to sometimes, less often, never, and "I don't know") giving reasons for worse or better assessment at an exam. They were able to express their opinion in these most frequently given reasons for success or failure:

1. bad luck – good luck
2. not being well prepared for the exam – being well prepared for the exam
3. experiencing the jitters – not experiencing the jitters
4. momentary indisposition – momentary good disposition
5. drawing a good question – drawing a bad question
6. biased judgement – lenient judgement
7. harsh approach of the teacher – amiable approach of the teacher
8. getting obscure questions – getting clear questions
9. making a bad impression on the teacher – making a good impression on the teacher
10. higher average of the other students – lower average of the other students

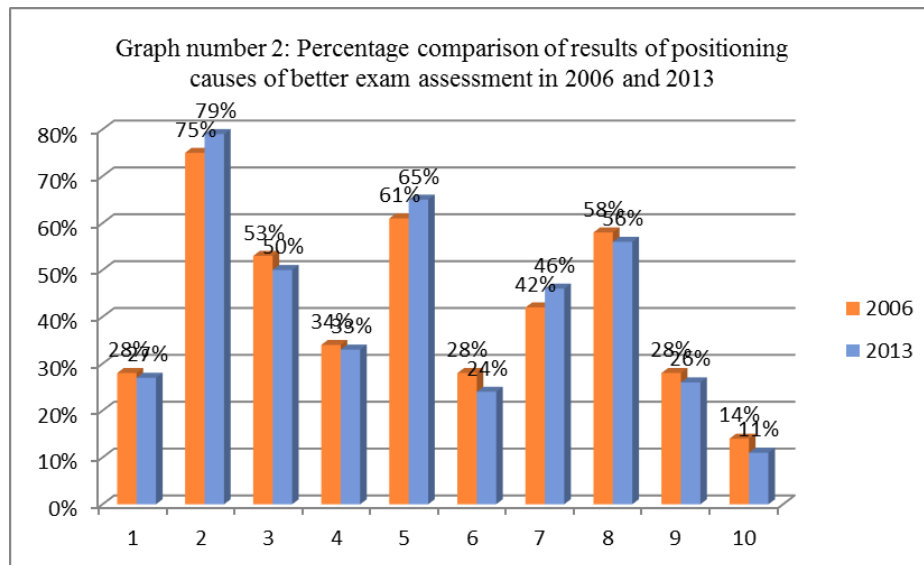
Graph No. 1 compares (in percentages) reasons given by students for bad assessment in exams in 2006 and 2013.



The graph shows (with only a marginal deviation) that in both compared years students indicated as the most common reason for failure: drawing a bad a question, on the second place they admitted not preparing well for the

exam and the third most common reason was experiencing the jitters. The thing we see as a positive outcome of the survey is the fact that students indicated subjective factors (like bias judgement, harsh approach of the teacher, giving obscure questions, making bad impression on the teacher) the least.

Graph No. 2 compares reasons given by students for obtaining a good assessment in exams in 2006 and 2013.



As reasons for good assessment in oral exams students in both years most often indicated being well prepared for the exam, drawing a good question and getting clear questions. The rest of the survey results as well as the small differences between both compared years imply that even after several years, students attribute their success or failure at exams to their own work as well as to a methodologically correct and humanely executed process of assessment.

The results of the survey show that in the process of assessment, university teachers try to eliminate unwanted subjective factors. The assessment process thus becomes a motivating factor for students. It mirrors the work of both students and teachers. It offers students insight into their own work and enables them to continuously look for ways of improvement. The assessment process thus helps to develop personalities of both the students as well as the teachers.

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Causal Relationship Model of the Technology Acceptance Process of Learning Innovation in the 21ST Century for Graduate Students

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Abstract

This research uses a correlational analysis. The objective of this study is to design a framework of the causal relationship model of the technology acceptance process of learning innovation in the 21ST century for graduate students. The research methodology is divided into two sections. The first section involves a synthesis concept framework for process acceptance of the causal relationship model of the technology acceptance process of learning innovation in the 21ST century for graduate students. The second section proposes the design concept framework of the model. The research findings are as follows:

- 1) The exogenous latent variables included in the causal relationship model of the technology acceptance process of learning innovation in the 21ST century for graduate students are self-efficacy and perceived organizational support.
- 2) The mediating latent variables of the causal relationship model of the technology acceptance process of learning innovation in the 21ST century for graduate students are the TAM Model: this includes four components: 1) perceived usefulness, 2) perceived ease of use, 3) attitudes and 4) behavioral intention to use the model.
- 3) The outcome latent variables of the causal relationship model of the technology acceptance process of learning innovation in the 21ST century for graduate students are actual use, online learning acceptance and student satisfaction.

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Peer-review under responsibility of the Sakarya University.

Keywords: Technology Acceptance Process, Learning Innovation, Organizational Support, Self- Efficiency, Actual Use, Online Learning Acceptance and Student Satisfaction

Introduction

Nowadays, there is strong competition in the area of technological development of digital wireless telecommunication systems and networks in order to support progress across many fields. As a result, the demand for mobile phones and portable computers has been increasing. Thailand is one country places importance on this issue. Therefore, the Thai government has focused on the development of a high-speed efficient ICT infrastructure across the whole country. Thailand's broadband network provides services nationwide, with a special focus on supplying wireless broadband for mobile communication devices that can satisfy teaching requirements. The education has recently brought a communication tool to help promote learning and to drive education and encourage "learning wisely" (B.E. 2554-2563 (ICT 2020)). This communication tool was introduced to meet the priorities of Thai Higher Education Policy Framework 2008 – 2013. The goal of this framework was to encourage higher education institutions to be a source of knowledge and high quality manpower in order to develop sustainability, to create a lifelong learning society by developing the infrastructure of higher education institutions and to increase the use of technologies and communication tools to facilitate learning through wireless electronic media.

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According to this policy, executives in higher education institutions in Thailand are required to develop patterns of teaching in the 21ST century that involve developing suitable plans, setting technological strategies and using communication devices such as mobile phones and portable computers as tools to develop m-learning teaching models. This will provide a channel through which knowledge can pass between instructors and students. As a result, the executives, instructors and students need to consider for the benefits and agree to understand how such learning innovations in 21ST century may work in practice.

This paper is divided in to the following sections: The first section contains a synthesis of the framework of the causal relationship model of the technology acceptance process of learning innovation in the 21ST century for graduate students. The second section proposes the design of the model.

Purpose of the study

The purposes of this study were;

- 2.1 To synthesize the concept of the framework of the causal relationship model of the technology acceptance process of learning innovation in the 21ST century for graduate students.
- 2.2 To design a concept framework of the causal relationship model of the technology acceptance process of learning innovation in the 21ST century for graduate students.

Research question:

What is causal relationship model of the technology acceptance process of learning innovation in the 21ST century for graduate students?

Concept Framework

In order to select the research to inform the development of the causal relationship model, eight related subject resources, including official public research and journals, were used to scope out the content of the theoretical framework as follows. (Anne,2013), (Boštjan et al., 2011), (Ying-Hsiang et al., 2011), (Chi-Cheng et al., 2012), (Jung-Wan & Samuel, 2011), (Iuan-Yuan Lu et al., 201), (Jazihan et al., 2013), (Norshidah & Nor, 2012)

Fig. 1. Theoretical Framework of the Causal Relationship Model of the Technology Acceptance Process of Learning Innovation in the 21ST Century for Graduate Students

Literature Review

5.1 Technology Accept Model

The technology acceptance model, also known as the TAM by Davis (Chi-Cheng et al., 2012), is an extension of a previous model – the theory of reasoned action (TRA) (Fishbein, & Ajzen, 1975). The TAM studies human behavior in order to explain the reasons that users (individuals and organizations) cite for adopting specific technologies (Venkatesh et al., 2003). The association between perceived usefulness and perceived ease of use has been identified by the TRA, forming the basis of the TAM (Davis & Arbor, 1989). Apart from the two main parameters already mentioned, the TAM also consists of other variables understood to affect technology adoption; attitude and behavioral intention to use.

5.2 Perceived usefulness

Within the TAM, perceived usefulness acts as an important factor. Perceived usefulness impacts on attitude and on intention, and aids progress of implementation. (Swan, 1981), (Triandis, 1980)

5.3 Perceived Ease of Use

One of the elements included in the TAM is perceived ease of use. The perceived ease of use is associated with perceived usefulness. Perceived ease of use sees attitude towards using the technology as an essential element. When the system is utilized at an individual level, this factor can be assessed. (Davis & Arbor, 1989)

5.4 Attitude

It is recognized that attitude influences intention. Attitude is made up of two parts: attitude towards the object and attitude towards the behavior. In this study, attitude towards behavior was considered (Fishbein, & Ajzen, 1975). According to the TAM, attitude is the association between usefulness and ease of use of a system. The intention to adopt a prospective a technology is influenced by the users' overall attitudes towards using technology.

5.5 Behavioral Intention to Use

An individual's expected or planned future behavior is represented in the model by their behavioral intention to use (Swan, 1981). It represents the expectancies that an individual has regarding a specific behavior in a given situation and entails the probability to act. Behavior can be predicted if intention is calculated accurately (Fishbein, & Ajzen, 1975).

5.6 Self-Efficacy

Self-efficacy is a key determinant of the degree of effort or perseverance that a person is prepared to invest in performing a behavior (Usher & PajaresArbor, 2008). People tend to have a higher chance of success in a given assignment when they have more self-efficacy (Wilson et al., 2007). Self-efficacy has its origins in the ICT self-efficacy (Eastin & LaRose, 2000). ICT self-efficacy is a branch of self-efficacy and has been characterized as a person's perception of his/her potential to use ICT. (Deborah & Christopher, 1995)

5.7 Actual Use

Actual system use refers to how often and the volume of system use by the user (Davis & Arbor, 1989). Davis

asserts that one's behavioral intention influences actual system usage. This is due to internalization and identification and may influence behavioral intention directly via compliance. It is further argued that if end users of the system are not informed or educated about the need or relevance of the system, this will greatly influence their behavioral intention to use it, and hence impact on actual use. (Nakayima, 2011)

5.8 Perceived Organizational support

Perceived organizational support draws on the social exchange theory developed by Blau to explain employee organizational relationships. According to the theory, each party has perceptions and expectations regarding the behavior of the other party, but these expectations and perceptions are related to the timing or the specifics of what each party must provide. If both parties benefit from the exchange, neither will know whether the expectations of the other have been fully met. (Doğan & Ayşe, 2010)

5.9 Online Learning Acceptance and Student Satisfaction

Online education is the most widely used term to describe online education as a means to deliver course content to the end-user via a computer using internet technology. Studies on online education demonstrate that it has a positive impact on students' performance due to its flexibility and convenience. (Eastin & LaRose, 2000)

Scope of the study

6.1 Variable of the study:

Research variables considered in this study are:

6.1.1 Exogenous latent variables: self-efficacy, perceived organizational support.

6.1.2 Endogenous variable:

Mediating latent variables: perceived ease of use, perceived usefulness, attitude and behavioral intention to use

Outcome latent variables: actual use, online learning acceptance and student satisfaction

6.2 Research Hypotheses:

This study employed correlational research to developing fifteen hypotheses and then tests the relationships between variables.

- H1 Self-Efficacy has positive effects on Perceived usefulness.
- H2 Self-Efficacy has positive effects on Perceived Ease of Use.
- H3 Self-Efficacy has positive effects on Online Learning Acceptance and Student Satisfaction.
- H4 Perceived Organizational support has positive effects on Perceived usefulness.
- H5 Perceived Organizational support has positive effects on Perceived Ease of Use.
- H6 Perceived usefulness has positive effects on Attitude.
- H7 Perceived usefulness has positive effects on Behavioral Intention to Use.
- H8 Perceived usefulness has positive effects on Online Learning Acceptance and Student Satisfaction.
- H9 Perceived Ease of Use has positive effects on Attitude.
- H10 Perceived Ease of Use has positive effects on Behavioral Intention to Use.
- H11 Perceived Ease of Use has positive effects on Online Learning Acceptance and Student Satisfaction.
- H12 Perceived Ease of Use has positive effects on Perceived usefulness.
- H13 Attitude has positive effects on Behavioral Intention to Use.
- H14 Attitude has positive effects on Actual Use.
- H15 Behavioral Intention to Use has positive effects on Actual Use.

6.3 Research Methodology:

The first stage is the synthesis the framework of the causal relationship model of the technology acceptance process of learning innovation in the 21ST century for graduate students.

The second stage proposes the design of the causal relationship model of the technology acceptance process of learning innovation in the 21ST century for graduate students.

Research results

Based on the theoretical framework of the causal relationship model, the researcher found that proposed variables to be included in this study were too broad and under researched. Hence, the researcher chose eight variables to consider specifically. These are:

- | | |
|-------------------------|--|
| 1) Perceived Competence | 2) Perceived Relatedness |
| 3) Perceived Autonomy | 4) Perceived Convenience |
| 5) Computer Anxiety | 6) Intention to Use |
| 7) Continuance | 8) Perceived information quality (PIQ) |

The non-selection of these 8 variables is to support the study that the technology will be chosen by the instructor in terms of information quality. Also the tools and software are determined by perception of convenience and relatedness. There are the reasons why the students cannot choose the factors by themselves. Moreover, another reason is the students who have graduated from the course, cannot access the software. From the reason above, the researcher created the Conceptual Framework of this study as follows;

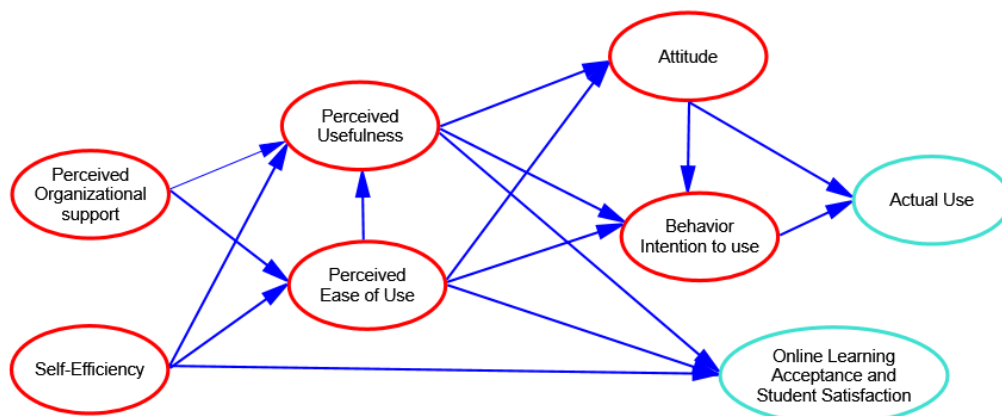


Fig. 2. Concept Framework of Causal Relationship Model of the Technology Acceptance Process of Learning Innovation in the 21ST Century for Graduate Students.

Conclusion

The causal relationship model of the technology acceptance process of learning innovation in the 21ST century for graduate students includes variables that benefit the development of innovative information technologies and communication tools in order to promote teaching and learning. The TAM describes the behaviors that allow users to adopt and use technologies. This model consists of perceived usefulness, perceived ease of use, attitude, actual use, online learning acceptance and behavioral intention to use. These variables show the factors that affect the technology acceptance. Moreover, there are two additional variables, self-efficacy and perceived organizational support, which influence the use of innovation in 21ST century. The result of this research is invaluable as institutions could use the information to plan the users' behaviors in using technologies and their acceptance.

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Challenges of a college tutor

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Abstract

This paper explains the changes that have emerged in recent years in Europe and Latin America about the universities, and therefore the challenges teachers are faced with, in order to become good tutors. The tutor's challenges are divided into pedagogical, social, administrative, and technical. The conclusion from reviewing the literature is that there are five main challenges for the tutors, which have to do with the mastery of his subject, creating a learning atmosphere, knowing the administrative processes, having the knowledge for instructional design, and the most complex of all, the efficient use of Information and Communications Technology (ICT).

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Peer-review under responsibility of the Sakarya University.

Keywords: Challenges, ICT, Relationship, Tutor, University.

Introduction

The dynamics of universities have changed in recent years. From universities in Asia and Europe to Latin America, the teacher's role has changed, and he now has not only the responsibility of teaching, but also has to do research, management and provide tutoring.

By becoming a tutor, a teacher generates a new pedagogical *relationship* which goes beyond scheduling content and learning activities or evaluations (Hernández, 2011).

For Gallego and Riart (2010), the tutor should be able to know how to educate the person, prepare the professional and educate the relationship. To do this, Del Rincón Igea (2000) states that the tutor must make three specific actions:

1. Facilitate the incorporation of students into college,
2. Support students with their academic itinerary, and
3. Guide the incorporation into the working world.

So, tutoring refers not only to support during college, but preparing the student for the future.

Therefore, in order to become a good tutor, a teacher should meet the expectations of the students, parents, directors, pedagogues, and their own expectations as indicated by Asensi & Lázaro (1989).

These expectations are divided into four areas: pedagogical, where the tutor must become the facilitator of learning; the social, where the tutor must create a pleasant and trustworthy atmosphere that allows teaching to take better shape; the administrative, where the tutor must adequately plan their course, either in person or online, and the technical, where the tutor makes use of technology, in which he or she designs audios, videos, software

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and other tools to enable better interaction with the students. For all the above, the tutor in any region of the world is faced with new challenges.

Justification

In 1998, UNESCO established globally in the "World Declaration on Higher Education in the Twenty-First Century: Vision and Action," presented in the "Framework For Priority Action For Change And Development In Higher Education," the need to modify the learning process in higher education, as it believes that due to the speed of social change, there is an urgent need to develop a new vision and a new model of higher education that focuses on the needs and abilities of the student.

To achieve this, UNESCO believes that it is essential to carry out in as many countries as possible, deep reforms in the educational systems and programs, as well as a policy of widening access.

In this same sense, due to the fundamental role of the teacher in the teaching-learning process, the same organization suggests that in addition to the various responsibilities of the teacher, the teacher must be able to provide guidance and advice, remedial courses, teaching for studying, and other forms of student support which will improve their living conditions.

Subsequently, a reference is made to the declaration of the European Higher Education Area (EHEA, or EEES for its abbreviation in Spanish), which is responsible for assisting students in programs that facilitate their learning, as indicated in the following text:

Among the various actions proposed based on the Bologna Declaration in 1999 in the search of a space in the European Community, the emphasis is on giving students opportunity for self learning. The first reorganizes teaching through the application of ECTS (European Credit Transfer System), the second is the need to adopt degree systems that are comparable and compatible across different states of the European Union. In both cases, the action of the teacher's tutoring plays a critical role in the educational process of the university students (Oro, 2004).

Finally, speaking at a Latin American level, Tuning Latin America and the 6X4 project were created, having done work in Mexico, Chile and Brazil, among other countries.

Findings

The challenges faced by the college tutor in Latin America can be inserted into the functions Berge (1995) indicates a tutor must have. These challenges can be:

- Pedagogical
 - Social
 - Administrative and
 - Technical
- 1st Challenge. Mastery of the subject.

The tutor must have the skills, habits, attitudes and knowledge required for the area of knowledge in which he or she operates. The better the tutor masters the area of knowledge, the easiest it will be to help the students. In this sense it is important to consider not only the theory, but also its practice.

2nd Challenge. Creating a propitious learning environment.

It is essential to establish a good learning environment, in which communication is the basis of learning. If the tutor masters the knowledge but fails in communicating it, learning will not occur. In many cases students are aware that the teacher knows but they are afraid of asking questions. Students must feel at ease to voice their concerns and achieve academic fellowship.

3rd Challenge. Knowing the administrative formalities and procedures of the university.

The tutor must be the source of information for the administrative formalities and procedures. For students, it is not necessary do the paperwork for them, but it is imperative to guide them on what steps to follow and the requirements of these procedures and formalities. There are a number of academic activities that students must

follow during their years in college. Following the tutors' example, upperclassmen can help freshmen students. The needs of a student during the first year are completely different from those who have already been at the university for more than two years. Using the model of tutors with experience, advanced students can also assist in the final process of helping beginning students to be successful.

4th Challenge. Instructional Design.

The tutor, either on an online course or in person, must be able to develop a program using an instructional design, at least in the basic phases of analysis, design, development, implementation and the evaluation or continuous improvement as indicated by Yukavetsky (2008). Although it is desirable for a tutor to be able to develop an instructional design linking teaching with research, making use of ICT and having a focus on complex thinking as proposed by the Universidad Veracruzana will achieve the desired goals. The challenge is that the instructional design must be seen as a process, not as a product. It should be a process in which learning is the goal, not only for the student, but also for the tutor.

5th Challenge. ICT use.

The weakest point of tutors in countries that are not developed or are in the way of being developed is the gap between teachers (tutors) and students in the use of technology for learning purposes. This is a major challenge for tutors unaccustomed to the use of ICT's, since they were accustomed to using technology on a daily basis as students do today. For that reason they must be prepared to close the gap.

Sanchíz Ruiz, Martí Puig, & Cremades Soler (2011) in *ITC Skills for Guidance Counselors*, indicate the skill requirements a tutor must have regarding ICT and they divide them into:

- Web Page
- Email
- Videoconferences
- Telephone
- Chat
- News
- Cell Phone Messages
- Software

Noting that, in terms of *Web pages*, the tutors should be able to find and use relevant websites, with official information, pages that are useful for the student, such as job sites or pages related to their professional development. They must also be able to create content for a website, and above all, know how to browse the Internet adequately. In like manner, they mention that the tutors must be able to communicate, request information, provide guidance and be sensitive to the needs of their students through *emails* that help, orient and guide students.

They also add that the tutor must be able to organize *videoconferences*, and in this way, provide remote guidance, and in a synchronized manner. The sessions may be individual or in group, and it is necessary to organize them properly so that they provide better support for the students. To do this, it must be determined if the conditions for a good session are met, and the number of students that will be addressed.

In addition, Ruiz et al point out that the *telephone* is a tool that many tutors do not wish to use to communicate with their students, but is often is the media the students prefer, because they feel it is more direct and gives an immediate response. Here, the tutor must be able to conduct a proper interview with the student and provide an efficient tutorial that allows solving the problems quickly.

The chat is another media preferred by the students, therefore the tutors must know how to use, provide important information, and if necessary, carry out the tutoring by using this tool. The teacher should properly manage the chat in-group sessions to avoid losing control of the conversation.

For online tutoring, the tutors should possess ability to guide students through *news* or other forms of communication.

Cell phone messages are very common among students, so their use for tutoring is essential to resolve problems or concerns quickly, which is why the tutor should be able to inform and guide by using this device. But before getting there, students must be allowed to communicate through messages also with their tutors.

Finally, the tutor must be able to use *software*. The software should be effective to enhance or improve student learning. The tutor must also be skilled enough to handle online psychometric testing, using all kinds of software available for tutoring and must show students how to use them effectively.

Discussion and Conclusion

It can be said that the first 3 challenges can be met in the short term, but the fourth and fifth are a bit more demanding. The university should be the one that dictates the path where to direct the instructional design, but in case the university does not, the teacher should take the initiative and implement an instructional design which must be considered in continuous improvement until it has matured.

As to the fifth challenge, tutors need to first recognize the technological gap between them and their students, and then develop strategies to use the ICT for their daily activities with the students. The university's administration must also support the efforts of the tutors to produce a better quality student.

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Challenges of teaching English at primary level

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Abstract

Teaching English at primary level is a challenging task in most European countries. The opinions vary on when the instruction should start, which approaches and techniques work best at this level, what kind of outcomes are desirable as well as what kind evaluation process should be applied. Recent findings of research studies support early beginning on one hand, however, the results show that the instruction must have clear aims, otherwise it can be even contra productive.

This article describes the situation in teaching English at primary level in Slovak schools. The author considers both benefits and constraints of introducing English language as a compulsory subject to primary education. The most serious concern is the lack of qualified teachers but at the same time the author underlines the lack of tried-and-tested experience which would be available to teachers. Even though there is an effort to help teachers become qualified for teaching at primary level there are many problematic issues concerning target group of teachers, especially the level of their language command. On the other hand the author appreciates the possibility to start teaching foreign languages to early language learners since there are a lot of benefits learners can gain. The author describes a case study where young learners involved in meaningful learning experience demonstrate how far such experience can take them.

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Peer-review under responsibility of the Sakarya University.

Keywords: teaching English language at primary level, foreign languages in Europe, young learners, teachers of foreign languages

Introduction

Language diversity and the support of the language education has been a priority of European countries not only due to the results and outcomes of various EU Council Conclusions (e.g. in 2002, 2008 or 2011) but also as a natural condition for the citizens to be equipped by at least two languages other than their own mother tongue. Recently there have been many changes in language education in different European countries with the main aim to lower the age of the beginning of language education. Early foreign language learners used to be a matter of exclusivity twenty years ago. However, nowadays more and more European countries seem to incorporate foreign languages already into primary curriculum to make sure they provide as much space for learning languages as possible.

The project directed by Hope, M. Language Rich Europe (Extra, G., Yağmur, K., 2012), involved 24 countries/regions with the aim to “promote greater co-operation between policy makers and practitioners in Europe in developing good policies and practices for multilingualism” (ibid p. 6) and the findings reveal there is a tendency to start rather early in many countries. 12 out of 24 countries/regions have foreign languages (mainly English, French and German) taught from the first year of primary education and seven from the mid-phase and three from the final phase of the primary education (ibid p.8).

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The issue of starting to teach foreign languages in the formal education is rather complex and besides highlighting the positive aspects of early start, several problematic areas have to be mentioned as well. To start with the positive aspects, the main benefit of learning a foreign language at primary level is generally attributed to the fact that learners of this age to certain extent can make use of the natural process of acquiring the language. Children can acquire the language to which they are exposed in sufficient quality and quantity without the need to systematize the knowledge about the language. Most definitions of language acquisition describe it as a process in which learners master facts, rules or skills subconsciously, unaware of the reception process and without the connection to formal instruction. School context, however, place children mainly in the learning situations, which according to Krashen (1982) differs from acquisition with the conscious focus on mastering new facts, information or a skill. Ellis (1997, p.3) defines the second language acquisition as "the way in which people learn a language other than their mother tongue, inside or outside of a classroom". In this context he uses the term 'second' not to contrast with the term foreign but to express that whether people learn languages through the direct experience – living in the country, or as the result of the classroom instruction, "it is customary to speak generically of second language acquisition" (ibid.). Still different, however, is the situation in which children are to learn the language which is used exclusively in the school environment and is not spoken in out-of-school environment. Dörnyei (2009, p.136) suggests the implicit-explicit dichotomy in specifying how these two processes differ. His understanding of explicit learning is as the process which is generated and directed by the learner's intention to understand the rules or regularities in order to master the concepts presented to them. It is mainly connected to the school context. On the other hand implicit learning is seen as the process in which the learner makes no conscious attempt to learn the material although, as Dörnyei underlines it is not unattended learning, i. e. there needs to be some kind of stimulus in the environment.

Language acquisition, however, becomes reality on condition that learners are exposed to the target language sufficiently. Children need to see and hear sufficient amount of examples so that their brain can systematize language samples and derive the rules of how something is used and in what circumstances. That is true about both first and second/foreign language acquisition. While conditions for first language acquisition are clearly and easily imaginable, the conditions for foreign language acquisition are more difficult for teachers to depict.

The first problem is the amount of time allocated for teaching languages at primary level. In general the amount of time allocated for teaching foreign languages varies from 1 lesson per week up to 5 lessons per week and this variability depends often on the school priorities, so this number can vary also within the same country. The lower amount of teaching foreign languages in school setting means the lower exposure. This time can hardly be considered sufficient and as Lightbown and Spada (1999, p.165) call it a "drip-feed approach" can in fact have a negative impact on learners who realize that for many years that have remained at the same level or are making only very limited progress. On the other hand, even though the time for language teaching is rather limited, the most important seems to be what teachers do to support acquisition of the target language in the classroom. As the most crucial for language acquisition seems to be:

- Listening to the (high quality) target language
- Reading picture books (with assistance)
- Using language in natural contexts (experiential learning)
- Using/recycling language in a variety of contexts

While building a course on these premises it also has to be taken in account that the dominant classroom activities should be based on such activities that children like and naturally incline to even outside the classroom context. They need to experience learning through games, songs, stories etc. and it is not enough for them to use a textbook and a practice book during their lessons.

Another important condition of allowing children to benefit from early learning experience is the awareness of teachers that language develops in certain stages and a child has to go through each one while learning the language. Language development of early language learners is divided into several periods and the teacher has to respect the specificity of each of these periods. They are similar to the periods of language development of a child acquiring the mother tongue. However, they differ in length, especially in the initial stage.

silent period – is the period of adaptation and accommodation to a new language; the children have to figure out what is expected from them, the meaning of words and phrases in given linguistic contexts, etc. However,

teachers usually try to engage children in classroom activities where some kind of response is expected from children from the very first encounters with the target language. There are clear signs of this period present in child's hesitant and non-responding behaviour during the lessons. This means they need to be given more time to get acquainted with the language and see more examples on which they could build their confidence. It is never effective to push the child too much. There are many examples of children who hesitate to speak English during the first lessons not because they might be less able than others but simply because they need a longer period to adapt to the foreign language environment.

reproductive period – seems to be one of the longest periods in the school environment. It is the period when the child responds to the stimuli usually repeating what was said by the teacher or other children. The child speaks or writes although it is not a real production. Children need a lot of examples, guidelines and hints in order to achieve a task.

repro-productive period – is usually reached in the higher levels of primary education. Children still need a lot of examples and cues, however, they are able to modify them and say something what they really want, i.e. what is true about them and their world.

early production period – this is the typical borderline of the primary education and the lower secondary education where children are able to produce pieces of spoken and written communication after sufficient practice of certain language samples.

productive period – starts after child's development of abstract thinking has been completed, i.e. usually at the lower secondary level. The child is able e.g. describe a picture using certain cues whether in written or spoken form or perform a dialogue in a familiar situation.

Understanding this natural language development can help teachers to state realistic aims for their teaching as well as realistic expectations from their learners. Being clear on the above mentioned principles, i.e. being aware of the child's cognitive, psychological, physical and social development as well as the development of language, will allow the teacher to start building positive attitude of children towards learning a foreign language in general. This is very important since the area of measuring the outcomes of the learning process seems to be still rather problematic. Published data which come from different socio-political contexts (Cameron, 2001, Lightbown and Spada, 1999, Lojová, 2005) indicate that children who experience an early start benefit most in the area of listening comprehension and pronunciation, however, learning systematically grammar of the language seems to be hindered due to the underdeveloped abstract thinking of early learners. As Cameron (ibid. p.17) highlights "receptive skills are likely to remain ahead of productive skills, and grammatical knowledge, which is linked not just to language development but to cognitive development, is likely to develop more slowly for younger learners." This fact has to be taken in consideration not only when planning activities for early language learners but also when selecting which areas should indicate the progress made. That seems to cause a lot of confusion, especially among teachers of lower secondary level who take over young learners and feel there should be a lot to build on. However, often their expectations put on the young learners in the area of production are unrealistic and therefore unmet. Foster-Cohen (1999, p.9) uses the distinction of 'competence' and 'performance' which was introduced by Noam Chomsky and which reflects the problem of what children can do with the language in contrast of what they actually do in some situations (Straková, 2009).

Teaching English at primary level: the case of Slovakia

English language is a part of primary education in Slovak schools and there has been a lot of discussions about pros and cons of this change. Transformation of educational system in Slovakia has brought a completely different situation to teaching foreign languages. English is taught as the first foreign language from year 3 as a compulsory school subject. However, the policy since they change the their decision about which language should be taught as the first compulsory a from which year it should be taught rather frequently.

However, the most serious problem in incorporating the ideas of change into Slovak educational system is the lack of sufficient number of qualified teachers in the field of primary education. There are many schools where lower secondary teachers of English teach also at primary level. Even though that is better than having non-qualified teachers teaching, there is too much lower secondary interference in such cases which might be de-

motivating for young learners. That is especially typical for teaching grammar and in testing learners in general. Lower secondary teachers do not know the characteristics of young learners and they often do not choose appropriate techniques for helping learners learn since something that works for older learners might cause problems to the younger ones.

On the other hand lower secondary teachers of English have usually better command of the language and that can be helpful for the learners who need a lot of target language exposure. Training of primary teachers who need to learn English as well as learn how to teach it, or in other words the so called “fast track” training, can bring questionable results and there is a worry that this training can actually make the situation worse since a lot of “qualified” teachers of low quality will be in teaching practice. Universities as well as the Ministry of Education propose different training programmes for primary school teachers who are qualified for general teaching at this level but lack the qualification to teach English. These teachers demonstrate a high level of creativity and competence for working with young learners. They have a tendency to transfer activities which are successful in learning other subjects into English and thus direct the learning process to the real needs of young learners. On the other hand their level of language command is in general rather low so they fail to provide necessary model and exposure of children lacks high quality language samples. These teachers need a lot of language support and refreshment courses so that they can constantly develop and improve their language competence. Besides that they need a lot of examples of good practice and tried-out experience which can be shared among teachers. Building a programme for young learners of foreign language needs to incorporate key principles which would enable the enhancement of early start benefits. Cameron (2001, p. 19), e.g. mentions principles such as:

Awareness of how children try to construct meaning

Awareness of space children need for language growth

Understanding that language in use carries cues to meaning that may not be noticed

Understanding that children’s foreign language learning depends on what they experience.

Teachers have to be clear on how to apply these principles in every-day teaching. Most of them, however, rely on textbooks they use and believe that textbook authors are authorities who know how teaching of young learners should happen. Deep understanding of conditions for acquiring the language should be the prime aim of training courses where teachers should master the ability to plan systematically for reaching language aims.

Another worry that has to be expressed is connected to qualified lower secondary teachers who are involved in primary ELT. Their command of language is much higher, however, they lack the understanding of the age specificity of primary learners. As it has already been mentioned, these teachers have a tendency to overlook the difference between the acquisition and the learning process and expect that young learners will demonstrate the same skills as older learners. It is difficult for them to imagine how to introduce a language structure without explaining the rules. These strategies and techniques - such as using context for inductive teaching – should therefore become the prime focus in training courses for lower secondary level which aim to extend their qualification also for primary level.

Tertiary education of teachers-to-be with specialization on teaching foreign languages seems to clash with traditional understanding of what should be a part of educational package for language teachers. Universities in Slovakia tend to keep to traditions and find it difficult to understand that teachers undergoing training or requalification might have different needs than undergraduate students with no experience of teaching. Therefore, we hear a lot of complaints from various sides that courses which aimed to solve the problems with the lack of qualified primary teachers, are not extremely successful.

2.1 Background of the case study

The following case study presents the results of a longitudinal research conducted during the period of two years at a Slovak primary school. It was focused on the implementation of a reading programme with the aim to prove its impact on the level of general understanding of children as well as the width of their vocabulary. The experimental reading programme was implemented into the year three and year four, it means for 8 and 9 years old learners. They have started to learn English in the first year of their schooling and the classes were taught

within the school hours. The time allocated for English was one lesson per week in year 1 and year 2 and three lessons per week in years 3 and 4.

In year 3 the experimental reading programme consisted of regular reading assignments given to children with a new topic usually once a month. Each assignment consisted of a set of books which children were asked to read and make a record of the books they have read into a reading diary. The books were at the beginning very simple – there were single words or simple sentences accompanied by pictures demonstrating the meaning of the words and sentences. Children were first given time to get acquainted with the books at home since it was an online programme. After this time the teacher had a lesson with the focus on checking the understanding and pronunciation in the lesson. The reading programme of year 4 consisted of in-class reading – an activity in which children read a complete storybook divided into parts – and online reading assignments. In-class reading was organized through Reading Days, which were repeated regularly throughout the school year. Each Reading day had the same structure – lead-in, pre-reading task, individual reading, post reading activities consisting of comprehension check and summarizing of the text read.

Besides Reading Days learners continued with online reading assignments from the previous level where the learners as on-line readers each month received a new assignment – they read a selected book, listened to a recorded version of the book, answered the quiz questions or filled in a worksheet. The online programme allowed the teacher to monitor individual learners' progress since every activity (number of readings, number of quiz points, number of retakes...) was recorded and displayed to the teacher.

Through the presented reading programmes learners were exposed to the higher extent and a wider variety of texts in comparison with the amount of texts presented by their textbook. In order to see the impact on the ability to understand the texts and see the growth of their word stock the experimental group was tested at the end of two-year pilot period. The instrument selected for measuring this impact was based on Cambridge Young Learners English Tests – Starter level, which was given to both the experimental and a control group.

The sample consisted of 55 children in the experimental group (E) and 55 children in the control group (K). Children in the control group did not come from the same school although the conditions of learning were very similar to the experimental group. The learners were in their fourth year, they started to learn English in year 1 with 1 lesson per week and from year 3 they continued with three lessons per week. Both groups were taught by qualified teachers from the beginning and used the same textbook. Selected children had no other extracurricular classes focused on learning English. Those children who attended language school or private language lessons were excluded from the sample. There was an intention to have the same number of children in each group and they were chosen randomly. The test tasks were focused on reading comprehension checked through matching tasks, fill-in tasks, look and name tasks and answering tasks. The results from the sample groups were compared using the Mann-Whitney U test to confirm that there was significant difference ($p = 0,000780$) between the groups. The box-and-whiskers graph (fig. 2) presents the overall reading results distributions in the group. The mean value in an experimental group was 18,60364 and in the control group it was 17,09091.

Table 1.

Type=K Frequency table: RWPT (stat_der.sta) K-S d=,15452, $p < ,01$

Category	Count	Cumulative Count	Percent of Valid	Cumul % of Valid	% of all Cases	Cumulative % of All
10,00000<x<=12,00000	1	1	1,81818	1,8182	1,81818	1,8182
12,00000<x<=14,00000	4	5	7,27273	9,0909	7,27273	9,0909
14,00000<x<=16,00000	10	15	18,18182	27,2727	18,18182	27,2727
16,00000<x<=18,00000	29	44	52,72727	80,0000	52,72727	80,0000
18,00000<x<=20,00000	9	53	16,36364	96,3636	16,36364	96,3636
20,00000<x<=22,00000	2	55	3,63636	100,0000	3,63636	100,0000

Missing	0	55	0,00000	0,00000	100,0000
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Table 2.

Type=E Frequency table: RWPT (stat_der.sta) K-S d=,12146, p> .20; Lilliefors p<,05

Category	Count	Cumulative Count	Percent of Valid	Cumul % of Valid	% of all Cases	Cumulative % of All
8,000000<x<=10,00000	0	0	0,00000	0,0000	0,00000	0,0000
10,00000<x<=12,00000	3	3	5,45455	5,4545	5,45455	5,4545
12,00000<x<=14,00000	3	6	5,45455	10,9091	5,45455	10,9091
14,00000<x<=16,00000	8	14	14,54545	25,4545	14,54545	25,4545
16,00000<x<=18,00000	13	27	23,63636	49,0909	23,63636	49,0909
18,00000<x<=20,00000	7	34	12,72727	61,8182	12,72727	61,8182
20,00000<x<=22,00000	13	47	23,63636	85,4545	23,63636	85,4545
22,00000<x<=24,00000	7	54	12,72727	98,1818	12,72727	98,1818
24,00000<x<=26,00000	1	55	1,81818	100,0000	1,81818	100,0000
Missing	0	55	0,00000		0,00000	100,0000

As indicated in the categorised histogram (fig.1) the distribution of the pupils according to their results in the experimental (E) and control group (K) differ. The mean value in the experimental group is 18,60 and in the control group is 17,09. It is equally important to take into consideration median (see fig.2) in this context, that is in this case similar to the mean - 18,5 in the experimental and 17,0 in the control group. Out of 39 pupils who reached more than 18 points there are 11 students from the control group and 28 from the experimental one. Out of 29 pupils who had less than 16 points there are 15 pupils from the control group and 14 from the experimental group (see tables 1 and 2).

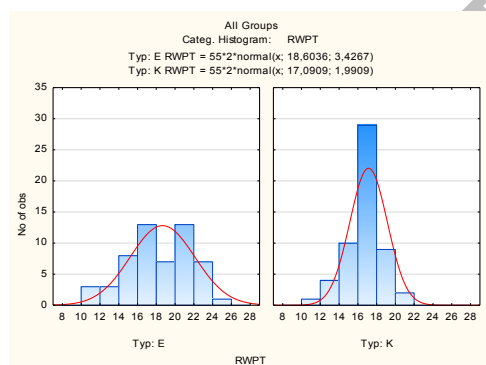


Fig.1

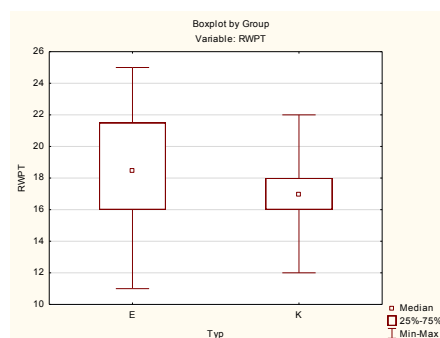


Fig.2

The results and experience gained from this experimental project disclosed encouraging findings, which support the initial hypothesis that the development of reading as a skill from the early beginning significantly influences the ability of learners to understand foreign language texts and helps to widen the vocabulary of children. Reading programmes, if implemented into the learning process as a regular and systematic element, provide the space and opportunity for gaining desirable reading habits. Children step beyond the textbook limits and have a chance to acquire words they would otherwise never come across. At the same time such activities offer exposure to the (high-quality) target language which sets the basis and stimulation for both acquisition and learning. Last but not least they represent meaningful activities for learning about the world around. These can also help learners to proceed from receptive to productive stage in their learner development much earlier.

Conclusion

The introduction of early start into the system of education in Slovakia can be viewed in the context of complexity of this introduction. There are many positive aspects and as it has been presented there are good practices, which can be viewed as beneficial for the learners when it is accompanied by a qualitative change of approaches to teaching young learners. The factors which influence the success in learning need to be considered thoroughly by educators who design training and qualification programmes for teachers. The key principles underlying good practices of early language learning must not only be incorporated into the documents but they need to be understood and accepted by the teachers themselves in order to reach desirable outcomes.

Many opponents of early language learning claim that the process of introducing foreign languages into primary level is too demanding and the effort is not worth it. It would be difficult not to admit the truth of these arguments especially after naming all problematic aspects above. It really is difficult to guarantee the high quality of foreign language education in conditions where there are so many constraints. It seems that the most problematic point is that teaching foreign languages has become a compulsory for all primary schools. If left on the decision of each school director the start of foreign language teaching would reflect more realistically the conditions, which schools have. Those schools where there is no lack of qualified teachers and which have had some experience with teaching foreign languages even in the past might continue teaching with ease. On the other hand if the school faces crucial problems such as e.g. no qualified language teachers for primary level at school, teaching could start later. Global decisions – whether for or against teaching foreign languages at primary level – seem to be extremely problematic in Slovak environment and they seem to bring more constraints than opportunities.

However, the case study results presented in this article point to a very important fact. If teaching process is set appropriately, keeping all principles of early language learning in mind, the results can be rewarding for both teachers and learners. Children have positive attitude towards learning the language, they have confidence in their skills and will probably proceed more promptly in the following years. This stage of early learning is absolutely essential as pre-production stage and children cannot produce the language unless they have spent enough time in pre-production stage. Moreover, very early they will have to cope with age constraints – children becoming less and less communicative in pre-puberty age. To sum up, losing the opportunity to start with early language learning would deprive children from using potential for natural learning and natural use of language in a given context.

Acknowledgements

This article presents partial findings collected while working on project KEGA 006PU-4/2012 that is supported by the Ministry of Education, Science, Research and Sport of the Slovak Republic.

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Chemo-entrepreneurship: learning approach for improving student's cooperation and communication

(Case Study at Secondary School, Jakarta)

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Abstract

This study aims to determine the ability of cooperation and communication student by applying a chemo-entrepreneurship learning approach. This study was conducted to the students of secondary school that uses descriptive analysis method. The ability of cooperation and communication of the students was assessed using three assessment instruments, self-report; peer review and observation sheets. They are made based on seven indicators, be responsible of the task; create a conducive atmosphere during the discussion; take part in decision-making; respect the opinions and decisions of the group; express ideas clearly and effectively; choose suitable words and the good intonation; respond to other interlocutors positively. The results of this study indicate that chemo-entrepreneurship approach (CEP) can be applied to improve the ability of student's cooperation and communication.

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Peer-review under responsibility of the Sakarya University.

Keywords: Communication skills, Cooperation Ability, Chemo-Entrepreneurship

Introduction

Education of secondary school aims to prepare students for higher education, but based on BPS data on February 2012, the number of workers of secondary school graduates in Jakarta 1.09 million people (23.05%) differing only slightly from graduates of Diploma and University of 1.13 million people (23.89%). They are not supported by adequate soft skills, such as personal skills, social, communication, and self-management behaviors (Klaus, 2012). In anticipation of these conditions, learning at secondary school should provide sufficient portion to develop students' soft skills.

Learning of chemistry in secondary school has scope to recognize, respond to, appreciate and understand the science, develop scientific thinking habits such as critical thinking and creative, independent, and have a positive attitude. So that learning chemistry can be used to develop student's soft skills, especially interpersonal skills consisting of the ability of cooperation and communication. Interpersonal skills is the ability that allows a person to work efficiently with others without personality conflicts (Shahani).

The results of observations at two different schools suggesting that the ability of student's cooperation and communication still need to be improved. At secondary school 8 Bekasi respectively were 39.45% and 52.76% and at secondary school 43 Jakarta were 55.34% and 64.67%. Based on this, it is necessary to make chemistry learning approach that touches important aspects of learning. The purpose of the chemo-entrepreneurship learning approach abbreviated CEP is to motivate the students to have a scientific attitude, creative thinking and innovative

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so they have the entrepreneurship spirit (Supartono, 2006). This approach is expected to learn more enjoyable chemistry and provides them with opportunities to optimize their potential to produce a product.

The research by Booyesen and Grosser (2008) and Lavasani (2011) give the same conclusion that the cooperative learning will improve the social skills of students. Social skills are associated with the ability to socialize with other people. It also can be compared with interpersonal skills. In this study, there will be analysis student's interpersonal skills, especially the ability of student's cooperation and communication through chemo-entrepreneurship learning approach.

Methodology

This study used a descriptive analysis method with the aim of analyzing the student's interpersonal skills, especially the ability of cooperation and communication through chemo-entrepreneurship learning approach. It was conducted at secondary school 39 Jakarta with 40 students grade XI as a sample.

The indicators of ability of student's cooperation and communication in this study include: (1) be responsible of the task, (2) create a conducive atmosphere during the discussion, (3) take part in decision-making, (4) respect the opinions and decisions of the group, (5) express ideas clearly and effectively, (6) choose suitable words and the right intonation, (7) respond to other interlocutors positively (Teodoro, 2005).

Implementation of chemo-entrepreneurship learning approach is basically through several phases of activities: (1) face to face, (2) group discussion, (3) literature review, (4) planning to produce the products, (5) experiment and written tests (Setyo Rini 2011). These stages are common steps that are designed based on the primary purpose CEP learning approach that can develop new competencies ie entrepreneurship competence.

The data obtained in this study is the result of self-reporting, peer review, and observation. Data collection was performed three times that at the first session, the fourth, and the eighth. Description of the activities of each session as this following:

- a. The first session, learning activities is conducted in the laboratory. Students in a group make mouthwash and the sink cleaner after the teacher explains about the concept of molarity.
- b. The second session, each group must present the result of previous experiment.
- c. The third session, the students do the experiment about the factors that affect the rate of reaction, and then they present the results.
- d. The fourth session, the teacher explains about the factors that effect of reaction rates through video about making economic products related to the subject matter.
- e. The fifth session, the teacher elaborates the catalyst in daily life using video about producing the economic products associated with the learning materials.
- f. The sixth session, students in a group discuss about the reaction order and the provision of project worksheets manufacturing economically valuable products.
- g. The seventh session, students have individual quiz about the order of the reaction rate equation.
- h. The eighth session, each group presents the products. The other groups give feedback and critical question
- i. The ninth session, students have assessment about the chapter reaction rate. They are ready to administer the exam with conducive atmosphere.

Results and Discussion

Data of the ability of student's cooperation and communication obtained from self-report, peer review, and observation which include seven indicators. The three types of questionnaires are used to triangulate the data. Before the lesson begin, the student complete the self-report questionnaire. At the end, the students fill in a peer review. During the learning process, the observer fill in the sheet. Description of the research findings as this following:

3.1 The ability of responsibility of the task

The ability of the responsibility for the task group are on excellent criteria. It can be seen that any task assigned by the teacher tend doing equitable division labor. Nobody is more dominant in the task group, and no student who rejected the division of tasks assigned according to the agreement of the group.

Table 1. The First Indicator Data

The Data Collection	Questionnaire	Percentage	Criteria	Conclusion
First	Self-report	85%	Excellent	Good
	Peer Review	80%	Good	
	Observer	76%	Good	
Second	Self-report	87%	Excellent	Excellent
	Peer Review	82%	Excellent	
	Observer	79%	Good	
Third	Self-report	88%	Excellent	Excellent
	Peer Review	85%	Excellent	
	Observer	84%	Good	

3.2 The ability to create a conducive atmosphere during the discussion

In the second indicator, there is an improvement of each data retrieval. The students have excellent criteria at the third data collection. All of data criteria is increase from good becoming excellent at all of data collection. It happened because the students begin to see the compactness and good cooperation in carrying out the tasks of learning of the reaction rate. They are used to working in a group and cooperating during the learning. It can be seen starting from the seventh meeting, the students are already familiar with the lessons and sitting in their group.

Table 2. The Second Indicator Data

The Data Collection	Questionnaire	Percentage	Criteria	Conclusion
First	Self-report	75%	Good	Good
	Peer Review	72%	Good	
	Observer	72%	Good	
Second	Self-report	78%	Good	Good
	Peer Review	74%	Good	
	Observer	76%	Good	
Third	Self-report	82%	Excellent	Excellent
	Peer Review	83%	Excellent	
	Observer	83%	Excellent	

3.3 The ability to take part in decision making

The achievement of the students in the third indicator is more than 76%. There is an improvement in the criteria of either being excellent at all the data collection. At the beginning of learning, students tend to just finish the job by himself. Only a few students who are active in group discussions. Before that, they are looking very passive then become enthusiastic in the group during the learning process further. They have started to be good interaction between members of the group and become involved in the decision making. The improvement of the ability of cooperation and communication is noticeable when they start to make the products of economic value and present it to the class as described in the eighth session. All of members in each group appears to hold the products they make. It proves that they decide together to make and present them.

Table 3. The Third Indicator Data

The Data Collection	Questionnaire	Percentage	Criteria	Conclusion
First	Self-report	75%	Good	Good
	Peer Review	72%	Good	

Second	Observer	72%	Good	Good
	Self-report	78%	Good	
	Peer Review	74%	Good	
Third	Observer	76%	Good	Excellent
	Self-report	82%	Excellent	
	Peer Review	83%	Excellent	
	Observer	83%	Excellent	

3.4 The ability of respect the opinions and decisions of the group

The achievement of the students in the fourth indicator is more than 76%. Increased achievement occurred on each instrument and data retrieval. The ability of students to respect the opinions and the decisions of the group is good criteria. During the beginning of the process of learning takes place, students tend to be less active and lack of closeness among members of the group. It causes the students have less respect the group's decision. However, when the teacher announces the best group election, it improves the student's motivation and raises the spirit of cooperation among members of the group. When another group is announced as the best group, another group is clapping and encouraging them. This increased capacity is also evident from the data obtained.

Table 4. The Fourth Indicator Data

The Data Collection	Questionnaire	Percentage	Criteria	Conclusion
First	Self-report	81%	Excellent	Good
	Peer Review	76%	Good	
	Observer	76%	Good	
Second	Self-report	82%	Excellent	Good
	Peer Review	78%	Good	
	Observer	78%	Good	
Third	Self-report	84%	Excellent	Excellent
	Peer Review	84%	Excellent	
	Observer	84%	Excellent	

3.5 The ability to choose suitable words and the good intonation

Table 5. The Fifth Indicator Data

The Data Collection	Questionnaire	Percentage	Criteria	Conclusion
First	Self-report	80%	Good	Good
	Peer Review	70%	Good	
	Observer	72%	Good	
Second	Self-report	81%	Excellent	Good
	Peer Review	77%	Good	
	Observer	76%	Good	
Third	Self-report	82%	Excellent	Excellent
	Peer Review	83%	Excellent	
	Observer	83%	Excellent	

In peer review, an increase of the achievement because of during the learning process they are required to talk actively and cooperate. The improvement also seen by the observer. There is the concordance in the data between the peer review and observer. The increase is very visible in the eighth session. At this session the students begin confidence in communicating. The sound volume is quite loud in conveying ideas, answer questions and provide questions with a choice of words that are easily understood by other students.

3.6 The Ability to express ideas clearly and effectively

There is an improvement of the data collection from the first up to the third on every instrument. It is happened, because they begin to have good communication skills. At the time of final project presentations and

answering the question, almost all students be able to express ideas clearly and effectively.

Table 6. The Sixth Indicator Data

The Data Collection	Questionnaire	Percentage	Criteria	Conclusion
First	Self-report	72%	Good	Good
	Peer Review	70%	Good	
	Observer	70%	Good	
Second	Self-report	76%	Good	Good
	Peer Review	74%	Good	
	Observer	74%	Good	
Third	Self-report	82%	Excellent	Excellent
	Peer Review	83%	Excellent	
	Observer	82%	Excellent	

The increase can be seen starting from the fifth session. At the session, began to occur frequently asked questions among students. In discussion, the students speak clear and straightforward in conveying his ideas. At the eight session, most groups make little notes to record the questions at time of presentation. Each member of the groups look very ready to present the results of the group discussions.

3.7 The ability to respond to other interlocutors positively

There is an increase in the achievement is high enough on the data from the peer review and the observer, as well as data from self-report an increase, although not as big as peer review and the observer.

Table 7. The Seventh Indicator Data

The Data Collection	Questionnaire	Percentage	Criteria	Conclusion
First	Self-report	76%	Good	Good
	Peer Review	72%	Good	
	Observer	71%	Good	
Second	Self-report	79%	Good	Good
	Peer Review	77%	Good	
	Observer	77%	Good	
Third	Self-report	82%	Excellent	Excellent
	Peer Review	82%	Excellent	
	Observer	82%	Excellent	

The student's ability to respond positively to the other persons is quite well. Students are able to give a good rebuttal and respond to the arguments given. Students tend not to interrupt one another during the discussion. The majority of students notice as other students presented the results of the group discussions.

3.8 The ability of cooperation

Based on the data obtained by referring to the first indicator until the fourth indicator, it can be concluded that the ability of student's cooperation reaches more than 75%. On self-report, students are already in the excellent criteria on the second data collection. In peer review and observer have excellent criteria on all data collection. because when the students fill in the questionnaire of self-report suspected that the results will be included in the assessment or the students fill in it in a hurry. Data generated through self-report, the first data collection is 80%, the second is 82% and the third is 85%. On peer review, the first data collection is 76%, the second is 78% and the third is 84%. Based on data from the observer, the first data retrieval is 75%, the second is 78% and the third is 83%.

Table 8. The Data of Cooperation Ability

The Data Collection	Questionnaire	Percentage	Criteria	Conclusion
First	Self-report	80%	Good	Good
	Peer Review	76%	Good	
	Observer	75%	Good	
Second	Self-report	82%	Excellent	Good
	Peer Review	78%	Good	
	Observer	78%	Good	
Third	Self-report	85%	Excellent	Excellent
	Peer Review	84%	Excellent	
	Observer	83%	Excellent	

Achievement of the ability of student's cooperation tend to be good criteria. At the beginning of the learning, there is lack of fair division of tasks and less interaction among groups. It leads that the decision of group obtained only from students who are very dominant. During the learning process, the ability of cooperation is increased. The students are getting used to learning in a group. When the teacher announces the best group, all students appreciate the results obtained from others. All members of the group applause for the best one and encourage itself to be the best group too.

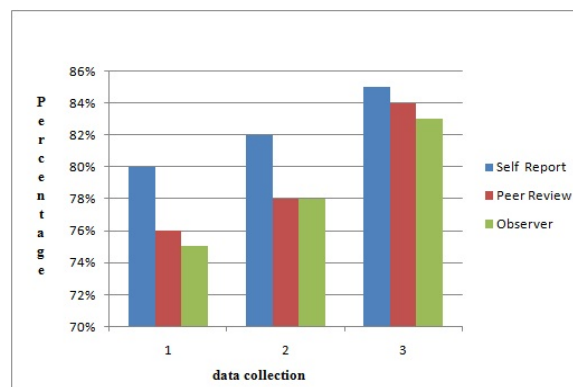


Fig 1. The Data of Cooperation Ability

3.9 The ability of communication

To assess the achievement of students' ability in communication refers to the fifth indicator until the seventh indicator that have been discussed previously. The percentage of the student's ability of communication is more than 71%. There is an increase on every instrument and the data retrieval. All of instruments aligned to produce the data of the communication ability. The communication skill increases the criteria from good becoming excellent in all the data collection. It is happened because the student's learning new experience and exciting for them. The improvement of communication skill can be seen when students present their final project and answer all questions asked from others. The achievement of the students on self-report is 75% the second is 78% and the third is 82%. On peer review, the data generated in the first data retrieval is 71%, the second is 76% and the third is 83%. In the first data collection by the observer is 71%, the second is 76% and the third is 82%.

Table 9. The Data of Communication Ability

The Data Collection	Questionnaire	Percentage	Criteria	Conclusion
First	Self-report	75%	Good	Good
	Peer Review	71%	Good	

Second	Observer	71%	Good	Good
	Self-report	78%	Good	
	Peer Review	76%	Good	
Third	Observer	76%	Good	Excellent
	Self-report	82%	Excellent	
	Peer Review	83%	Excellent	
	Observer	82%	Excellent	

The student's communication ability achieves good criteria. They have the ability to communicate well in choosing the word. Starting from the fifth session, interactions occur frequently among groups. The students ask many question critically. They are more confident, especially during presenting the products they make.

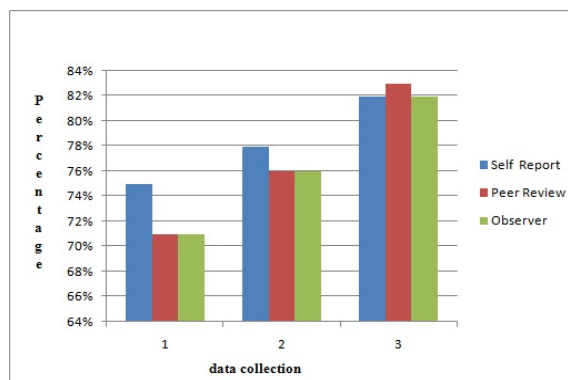


Fig 2. The Data of Communication Ability

Conclusion

The research was conducted at SMAN 39 Jakarta with the students grade XI as a sample, concluded that the improvement of the ability of the student's cooperation and communication happened through the implementation of chemo-entrepreneurship (CEP) learning approach. It can be seen from the achievement all of indicators of the ability of the student's cooperation and communication. The first indicator until the fourth indicator are the reference to assess the ability of cooperation. The fifth indicator until seventh are the reference to assess the communication skills of students. The indicator to increase the ability of student's cooperation and communication is the responsibility of the task, create a conducive atmosphere during the discussion, take part in decision-making, respect the opinions and decisions of the group, express ideas clearly and effectively, choose suitable words and the right intonation, respond to other interlocutors positively. The ability of students in each indicator assessment criteria achieves well and the indicator responsibility for tasks achieve excellent criteria. Based on the achievement of each indicator assessment, the student's ability of cooperation and communication increase from good criteria becoming excellent.

The chemo-entrepreneurship (CEP) learning approach can be applied in developing the ability of student's cooperation and communication. It is because this kind of learning also requires students to continue to work together to achieve mastery of learning and good communication.

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Child development in post-colonial contexts: educational change and ethnic transfiguration in a French Guiana Wayana-Apalai indigenous community

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Abstract

This paper presents a first attempt to describe an emergent dynamic: the transformation of family educational practices between Wayana-Apalai indigenous people of French Guiana. Ethnographic data collected between 2010 and 2013 show a large set of variations concerning care-giving time, house-keeping charges or the frequency of traditional activities. Taking into account the role of schooling and based on a critical analysis of the socio-economic and historical context, the authors interpreted the data as demonstrating the hypothesis that Wayana-Apalai have been involved in a process of Ethnic Transfiguration which in return has had a deep impact on traditional lifestyle, on community schemes for youth training and education and, last but not least, on child social development.

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Peer-review under responsibility of the Sakarya University.

Keywords: Apalai; Ethnic Transfiguration; French Guiana; Parenting; Post-Colonialism; Schooling; Wayana.

Research Context

One of the most interesting contributions of anthropology-related studies to education is a set of observations about local forms of parenting, children training and socialization-learning processes. Researches in this field have been contributing to demonstrate not only the existence but also, and above all, the pedagogical validity of these ancestral schemes of family and community practices (LeVine & New, 2008).

Between 2010 and 2014, we developed an ethnographic research based on a continuous fieldwork in an indigenous village in the Amazon region. During four years, we lived with a Wayana-Apalai community in Antecume pata, a remote village located in southwestern French Guyana, depending administratively on the town of Maripasoula. Our work aimed to observe local lifestyle and parenting standards and to describe a set of variables related with the dynamic of teaching and learning in family context. When we arrived in Antecume pata, the village was provided with an elementary school, functioning since 1986. Adolescents followed high-school lessons by a distance-learning program elaborated by French National Council of Distance-Learning (CNED – *Conseil National de l'Education à Distance*) and managed as an antenna of the Maripasoula high-school, in partnership with a local no-profit organization, the Yepé Association. In 2011, the local Educational Academy, acting in the framework of the directives of French Minister of National Education, opened a pre-elementary class in the village. Contemporarily, it closed the Antecume pata high-school antenna and built a dormitory in Maripasoula to host indigenous students at the town's high school. The Students' families perceived such a change as a "revolution". And, like in every revolution, it generated a crisis.

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.1. Traditional ecosophy vs. colonial logics

As we observed in other previous works, Wayana-Apalai traditional (in the sense of pre-colonial) forms of knowledge transmission and socialization training have been acting as powerful forces aimed to preserve the homeostatic balance between the community social requirements and the limits of natural environment (Ali & Ailincai, 2013). Traditional ecosophy –interpreted as a form of Amazonian *Weltanschauung*- has been permitting Wayana-Apalai to adapt the Amazonian biotopes to their needs and to adapt themselves to the different ecological and cultural landscapes occupied during their displacement across the northwestern area of the Amazon region (Ailincai, Jund & Ali, 2012. For a deeper reflection on the notion of ecosophy, see Ali, 2010 and 2012). During the last century, when some communities migrated to the territories corresponding to actual French Guiana to establish themselves in High Maroni area, they took contact with the French colonial structures (Chapuis & Rivière, 2003). With the de-colonization process, they became French citizens and some of them accessed to public offices thanks to their knowledge of the French language and to other skills needed by Public Administration (Cognat, 1967).

During the 1960s and 1980s, André Cognat, founder of Antecume pata, created an informal school opened to all the villagers and aimed to train indigenous people to understand western world (and French culture) and to manage the stressing contact with the post-colonial reality (Cognat, 1977). Between the 1970s and 1990s, the French Government created a scheme to grant the existence of a primary school in several isolated indigenous villages of French Guiana. At the present days, the High Maroni region, where the Wayana-Apalai communities inhabit, dispose of a network of elementary schools in Elahé, Cayodé, Taluwen, Antecume pata and Pidima villages. Most students' parents went at school and they attribute a considerable importance to the schooling process. In other words, they consider compulsory schooling as a "normal" phenomenon, integrated to their daily-life and not interfering with their traditional educative style. Although, most of them consider that traditional education has to be preserved, because it offers a unique set of skills related with biologic survival in the peculiar environment (i.e. the tropical forest) they live.

.2. State strategies vs. community needs

In 2011, families responded positively to the change imposed by the State. At Antecume pata, all children between 3 and 5 years of age are integrated into the new pre-elementary class and all adolescents after completing the elementary courses successfully moved out from the village. Most of them enrolled in the Maripasoula high-school, others had to move to schools or training centers in Cayenne, Kourou or Saint-Laurent du Maroni. At the end of the scholar year, a large majority of students' parents started complaining about the new system. They considered that school was distancing their sons and daughters from them and diminishing their parenting influence on their children's development. During these four years we have seen how the dynamics of schooling perceived by the parents as a double distancing between them and their children (on the one hand, the education of young children in kindergarten and on the other, the departure of the adolescents to middle school), has transformed the lives of people in Atecume Pata village .

.3. Research strategy

Having the opportunity to analyze a set of data gathered before and after the critical moment, we decided to interpret our ethnographic records in the framework of an ecosystemic approach. Based on Berry's works on influences of eco-cultural factors on cognitive style (Berry, 1971, 1976, 1995), on Bronfenbrenner's bioecological model –interpreting family as a human development ecotype- (Bronfenbrenner, 1979, 1986, 1995, 2005), and on Ogbu's critical studies on eco-cultural influences acting on ethnic minorities schooling (Ogbu, 1978, 1985, 1987, 1992), we considered that a coherent description of Wayana-Apalai educative model needed to integrate the family system, the community structure, the National power and the global context.

Hypothesis, goals and methodology

When we started our fieldwork, we considered the hypothesis that Wayana-Apalai communities of French Guyana were adapting their lifestyle as an effect of an ethnic hybridization process. Mexican sociologist Néstor García Canclini interpreted the notion of hybrid identity as a typical colonial heritage in the Americas (García Canclini, 1989). Based on his approach, we assumed that autochthonous communities, like Wayana-Apalai people, challenged by western colonial power, have been adapting their bio-social mechanisms to survive and to preserve their “ethnicity” (a perspective used, by Gourg, 2011). Although, we observed that such a model was far from Antecume pata reality.

Wayana-Apalai families perceive that, as an effect of the growing pressure of “modernity”, they are losing their resilience and their adaptability. During ethnographic interviews, old people identified no less than three factors contributing to this alteration. The first one is the paternalism of the State and the social aid system acting as a disincentive for preserving the traditional economic scheme, based on a subsistence model (hunting, fishing, gathering and slash-and-burn agriculture). Actually, the absolute majority of Antecume pata families receives the State assistance using financial aids to buy packed and frozen foods and beverages in Maripasoula. The second factor is that the school is considered as a bifacial institution. If on a side it allows children to be educated and to learn useful notions, on the other side it distances younger family members from traditional learning, knowledge and skills. The general perception is that new generations are preferring the “modern” way of life and the obvious preoccupation is that they will refuse the traditional life-style or, in the worst case scenario, that they will limit their ethnic identity to a folkloric functionalist surface. In addition, the feared risk is to lose the abilities requested to survive in their habitat: driving a boat, marching in the forest, obtaining food from natural environment and making handicrafts related with their daily tasks. Several prestigious voices have been appealing to French Government to avoid such a threat, asking for a reconsideration of administrative logics in Haut Maroni area (Grenand, 2000; Hurault, Grenand P. and F. & Lévi-Strauss, 1998).

The observation of patterns of variation in care-giving time, domestic charges and frequency of traditional activities gave us the opportunity to understand how subtle and irreversible was the impact of this change. In reality, what we were observing was an emergent dynamic of systemic de-configuration. Until 2011, The traditional resilience of Wayana-Apalai families has been permitting a certain balance between the different “ecosystems” constituting their social universe: the micro-systems of primary training (families and school), the community meso-system, the National exo-system and the globalized macro-system. However, the crisis generated by the abrupt change in school dynamics has been fueling a process of structural change.

1.1. From cultural hybridization to ethnic transfiguration

The sudden alteration of domestic rhythms and responsibilities, added with the gradual disintegration of the subsistence economy, the paternalistic policies of the State and the chronically unsolved political marginalization of indigenous communities in French Guyana, risks to drive Wayana-Apalai people to an ethnic transfiguration process. Such a dynamic, whose mechanism was accurately described by Brazilian anthropologist Darcy Ribeiro, explains the perverse dynamic that is leading ethnic communities to live at the margins of globalized economy, to negate their ethnic identity (or, more precisely, the set of moral values shared by the ethnic community), and to adopt habits and customs that would be considered as deviant in the framework of traditional ethic and survival logic (Ribeiro, 1971). In our previous works, we described the way Wayana-Apalai have been surviving as cultural entity thanks to a set of skills and knowledge transmitted through generations, based on an ecosophical world-vision recognizing the role of the natural environment as an active partner of their daily life (Ali & Ailincăi, 2013).

Those pages are dedicated to demonstrate the impact of “top-down” changes in the educational system (imposed by Public Administration without a serious mechanism of community participation) not only on traditional way of life of native communities but also, and above all, on preservation of traditional knowledge and local skills indispensable to live in Amazonian habitat.

Patterns of Variation in Wayana-Apalai Care-giving Style

During the scholar year 2010-2011, we observed five Wayana-Apalai families to identify the caregivers, their interactions with children and the time they spent “educating” the younger family members. Every family was observed during 24 hours in five opportunities and in different days (working-days and week-ends). Totally, we cumulated 2.400 hours of family life from direct observation. For every caregiver it was calculated the total amount of time invested in training and teaching activities involving children. We resumed our results showing the medium value of time spent by identified caregivers in educational activities during a typical day, as in Table 1.

Table 1. Time spent by Wayana-Apalai caregivers in educational activities (2010-2011)

Caregiver	Care-giving time
Mother	12h 33'
Father	1h 28'
Mother's Brothers	42'
Mother's Sisters	51'
Father's Brothers	10'
Father's Sisters	23'
Mother's Parents	4h 24'
Father's Parents	32'
Other Family Members	2h 11'
Other Community Members	43'

We repeated the same experience in 2013, with the same families, observing a sensible change, above all in working days (during week-ends, we observed a less evident variation with 2010-2011 figures), as shown in Table 2.

Table 2. Time spent by Wayana-Apalai caregivers in educational activities (2013)

Caregiver	Care-giving Time
Mother	10h 23'
Father	32'
Mother's Brothers	27'
Mother's Sisters	15'
Father's Brothers	03'
Father's Sisters	05'
Mother's Parents	2h 49'
Father's Parents	08'

Other Family Members	3h 12'
Other Community Members	1h 03'

Analyzing data, we observed that, apparently, the most committed caregivers are, in order, the mothers, the mothers' parents (the maternal grand-parents), the siblings and the cousins. Such a pattern seems not changing between 2010 and 2013. The most evident change is related with the total amount of time spent by parents with their children. For mothers' case, we observed that in 2013 they spent for care-giving activities two hours less than in 2010. Concerning fathers, in 2013 they spent only one third of time employed three years before for educating their sons and daughters. Other family members, as siblings and cousins –but also other community members, as shamans or administrative leaders- are supplying to this vacuum. Finally, we have to note that we observed similar patterns in care-giving relationships both with biological and acquired family members (for instance, adopted children).

Family Tasks between Tradition and Modernity

In 2010 we identified a set of family activities executed with the active participation of children and deeply related with the natural environment and the satisfaction of primary needs: agriculture-related tasks, little hunting (with traps, bows and arrows), big hunting (with rifles), fishing (with lines and nets or using poisonous plants), breeding of cachiri (a homemade traditional manioc beer), cooking and house-keeping, handcraft making and sewing, and participation to cachiri parties (gathering family and community members). We observed children (between 3 and 8 years of age or 3-8 year-olds) implied in those tasks, their sex and the number of days dedicated to those activities during the year. In 2013, we realized a similar study, with the same research protocol.

The evidence demonstrated how children were less involved in traditional activities and how daughters were gradually charged with more kitchen and house-keeping related tasks, as shown in Table 3.

Table 3. Participation of Wayana-Apalai children in domestic activities: number of days assigned to every activity in 2010 and 2013.

Activity	2010		2013	
	Boys	Girls	Boys	Girls
Agriculture-related tasks	334	353	61	112
Little hunt	355	271	198	101
Big hunt	18	0	4	0
Fishing (with lines and nets)	228	308	51	283
Fishing (with poisoning plants)	6	6	4	4
Cachiri breeding	0	161	0	213
Kitchen and house-keeping tasks	319	324	4	355
Handcraft making and sewing	327	349	103	352
Cachiri parties	9	8	42	40

In addition, we observed an evident augmentation of days dedicated to participate in cachiri parties, a pale remainder of ancestral rituals related with marake ceremonies (where initiates -and the entire community-, symbolically sanctioned the natural cycle of death and rebirth. See Hurault, 1968, 1972). Traditionally cachiri was offered to foreigners or family members coming from other villages. In present days, a cachiri party is one opportunity more to share large amounts of manioc beer with friends and neighbors, listening dancehall music at very high volume and sometimes, to substitute the traditional beverage with Caribbean rums and cheap whiskeys coming from Chinese shops behind the Surinamese borders.

Traditional Activities vs. Compulsory Schooling: the Ethnic Dilemma in Ultramarine Contexts

A vivacious debate is actually animating the academic circles and the public entities charged with educative tasks in French ultramarine territories. Actually, three critical factors represent the core of the problem.

The first one is represented by the general unsuccessful results obtained by ultramarine students in official evaluations realized at the end of the elementary school cycle. Most scholars consider that the multicultural context typical of former colonies, added to their peripheral situation in terms of socio-economic integration with Homeland, has never developed into the intercultural scenario imagined by political decision-makers (Dupuy, 2007; Léna, 2000). The lack of real integration has marginalized the autochthonous and ethnic communities occupying most of ultramarine lands and the school has failed its declared goal to work as a social elevator and to contribute to republican ideal of equal opportunities for all (Couchili, 2010).

The second factor corresponds to the voluntary exclusion of the notion of ethnicity in French juridical system. The administrative system logic is structured to offer equal services to every French citizen, in all territories under the State sovereignty. The “republican approach” had been applied for years in all public services, including school. The same National curricula was applied in every French school: in Normandy as in French Guyana or in French Polynesia. However, for the last two decades a new educative approach has been uprising, with the adaptation of some educative processes (above all on learning to read and write) and the creation of pedagogic tools and mechanisms focused on strengthening the knowledge of local languages and skills (Alby & Launey, 2007; Garnier, 2011; Maurel, 2010, 2012).

The third factor, the loss of traditional knowledge, depends largely on the second one. During the Colonial period one of the Homeland policies was the eradication of traditional cultures and the –often-forced-acculturation of indigenous communities. The decolonization process generates a certain degree of “conscience crisis” and the acceptance of the necessity to integrate, in a way or another, French citizens with autochthonous identity. Despite the efforts, the same mechanism of exclusion of the notion of ethnicity from French law is now under accusation, charged with not recognizing cultural differences, facilitating social distortions, and paradoxically with fueling ethnic discrimination (Grenand & Renault-Lescure, 1990). In fact, most of National policies are difficultly adaptable to territories and ethnic realities so far –and so different- from Homeland, and sometimes they generate the reticence of local communities (Grenand, 2000). In 2013, for indeed, the decision taken by the Minister of National Education to modify the working hours for all French school was strongly disapproved by most of Wayana-Apalaï villages. The extension of the daytime school was contrasted by the students’ parents because it was blamed to deepen the gap separating the new generations from familiarizing with traditional knowledge. Finally, the Major of Maripasoula was obliged to ask the National Government a long-term agreement to guarantee an exception from National norm for schools located under its responsibility due to the fact that indigenous habitants were not disposed to change their domestic planning and their family habits.

Conclusions on Family, Schooling and Colonial Heritage

The case of Wayana-Apalaï people of French Guyana is significant and representative enough to understand some of the problems related with educative system in ultramarine French departments and territories. The peculiar condition of their cultural and ecological landscapes; the existence of autochthonous identities struggling for the respect for their lifestyle; the existence of socio-economical disparities and the survival of Colonial

structures; amplified by the isolation and remoteness experienced by a large part of the population; and finally the inability of the State to adapt local realities to National standards are probably the causes of the declared failure of the traditional pedagogical mechanism of the Wayana-Apalai people.

The results of our work seem to confirm such a hypothesis. Our next step would be to apply the same analytical model to other French ultramarine settings to evaluate how and how much post-colonial logics have been impacting on ethnic community, their daily life and their general world-vision.

Acknowledgements

We would like to acknowledge the Pacific Doctoral School, the University of French Polynesia and the Research Laboratory EA4241 (Traditional and Contemporary Societies in Oceania) for the administrative support and the financial aid granted to this project. Also, we would like to acknowledge Wayana-Apalai community leaders and school teachers at Antecume pata for their collaboration during our fieldwork in French Guiana.

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Civic education and learning democracy: their importance for political participation of young people

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Abstract

We experience politics in our daily life and in all social spheres. People, particularly young people, always see politics as a complex process. Often, politically interested and motivated citizens are confronted with the concepts 'democracy', 'politics' and 'democratic elections' in various newspapers or on TV news. Moreover, there are intense debates about democratic deficits, and an increase in extremism is feared if the civic education young people receive is not enhanced. For these reasons, I intend to address the questions of how knowledge about politics is effectively provided through civic education and to show the impact political commitment has on young people by discussing the concepts of civic education, learning democracy and political participation.

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Peer-review under responsibility of the Sakarya University.

Keywords: civic education; learning democracy; political participation; young people

Introduction

We experience politics every day and in all social areas. Politics is experienced by the individual and, above all, by young people as a complex process. Often, politically interested citizens are confronted with the notions of 'democracy', 'politics' or 'democratic elections' in newspapers and television news. In addition, democratic deficits are often discussed, and a rise of extremism is feared if the civic education of the youth is not upgraded. Despite criticism that democratic decision-making processes are slow and that the involvement in politics reveal weak points, public political participation is a basic principle of democracy and is considered to be the heart of political considerations (Frevel, 2009: 7). New and intensive discussions on civic education run on for years, such as the adult education in the public in conjunction with professional development. The assumption is that people should be taught about "politics", and they should be able to implement what they have learned in civic education (Beer, Cremer, Massing 1999:11-12). Every citizen is entitled to judge social and political issues differently and, at the same time, to influence the judgments of others with his own judgment and behavior. Beside voter turnout, participation in protests, membership in political parties, associations and clubs a large number of possibilities for political participation in modern societies is affected by the means of the mass media (Rhombert 2009: 145). The political image and judgment of citizens depend on information from the media (Plasser 2006: 525). The media

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plays a significant role in imparting knowledge about politics. The reason for this is that civic education and the understanding of democracy allow citizens to participate in and focus on politics (Rhomborg 2009: 161).

But at the end of the 20th century and at the beginning of the 21st century, an accelerated decline of confidence in political institutions and in the political system has been registered. The number of non-voters is increasing, and the phenomenon of those discontent and disenchantment with politics is on the rise. For these reasons, I intend to address the question of how political knowledge is effectively provided through civic education. I intend to show the impact which discussions about civic education, learning democracy and political participation can have on the political commitment of young people. The starting point for this topic is the policy distance of youth because different European Values Studies revealed that young people are showing little interest in politics in their daily lives. It is remarkable that young people indicate that they have no interest in politics and feel that many politicians and, in particular, political parties have failed in addressing the needs of young people. Indeed, such serious situations should literally challenge civic education to spark political interest among young people in the classroom and outside of school.

2. Civic Education and Learning Democracy

What does civic education mean? What is the main focus of civic education? Wolfgang Sander stresses that the notion of "civic education" as a generic term for intentional political learning in educational institutions which is used and is not limited to those forms of political learning (Sander 2002: 12). Although there is no substantial and generally accepted definition about civic education in political science, this notion must be delineated from the concept of political socialization, civic and social education (Massing 1999: 27; Detjen 2007: 3).

a) Political socialization: The concept of political socialization is a general term for civic education and training. According to Buhl, educating young people to become members of society, who actively participate in the shaping of the political environment is a crucial step in the context of political socialization (Buhl 2003:16). In this context, the effort to bring the growing generation in contact with politics is the main task of civic education and training, which is defined as 'intended political socialization'. The functional political socialization shapes the political world view of an individual. The people who raise awareness in young people about political processes include family, neighbors, peer groups, the media, the military, the workplace and school as an institution that imparts knowledge, skills and values. Through the active collaboration in political decision-making processes in schools, such as student newspapers or elections of student council representatives, teenagers gain insight into the basic principles of liberal democracies, which can lead to more motivation and willingness on their part to become engaged in politics in and outside of schools (Detjen 2007: 3; Hellmuth/Klepp 2010: 91).

b) Civic education: Education means the civilization of a human being and aims to impact the behavior of individuals (Detjen 2007: 3). But in the course of industrialization, urbanization and political mobilization, a differentiation and institutionalization of civic education and training has happened. Social changes and political decisions, demands for stability in social and political structures, and the legitimacy by citizens led to the emergence and institutionalization of independent civic education and training. This means that in a system change or social change the concept of civic education becomes more important. Thus, civic education is both primarily system-oriented and stability-oriented (Massing 1999: 29).

c) Social education: As a subfield of pedagogy, social education also includes civic education. This is a targeted effort made by a person who is entrusted with education. One main aspect of social education is to promote the basic social attitudes. This includes the capability for empathy, cooperativeness, loyalty, solidarity and tolerance. The basic social attitude is used in the rational assessment of social conditions and issues. Recently, this concept was eclipsed by the concept of social learning. The concept of social learning refers to self-learning in social interaction and the socialization of the interaction (Detjen 2007: 4).

3. The Main Goals and Tasks of Civic Education

Civic education is an independent cross-section part of education which differs from conceptual and institutional tasks (Sander 2002: 11). The ultimate goal of civic education is to encourage the ability and willingness of political participation by providing information and the basis to make conscientious judgments, which is characterized as a "political rationality" according to Bernhard Sutor (Kuhn/Massing 1990: 285). Civic education as a prerequisite of rational and humane action must contribute to the democratization of society and the emancipation of an individual (Ibid: 282). Knowledge of politics, political consciousness and political participation can be viewed as the main objectives of civic education in modern democracies.

Civic education has to meet the goal of political maturity and independence of the citizen in a democratic system. When it comes to education in schools, four groups of citizens need to be considered. First, the apathetic group is made up of people who rarely deal with politics or very rarely cast their ballots in elections. They may be seen as a challenge for civic education and training. Second, the well-informed and judicious people who are very interested in politics. They are well-informed about political life and are not easily manipulated. Outside of elections and voting, they show no active involvement in politics. Third, enabled citizens have knowledge of opportunities for political participation and are capable of rational political judgment. The last group consists of citizens who are actively involved in politics. They hold party memberships, participate in political parties, interest groups or action groups. At this point, it is believed that civic education plays an important role in willingness (Massing 2002: 36).

3.1. Dimensions of civic education

Peter Filzmaier (2007) distinguishes three dimensions of civic education: ⁽¹⁾

- (1) Civic education as the imparting of knowledge: It deals not only with the transfer of factual knowledge, but also with the understanding of pragmatic coherences
- (2) Civic education as a freedom of expression and promotion for participation: Should "support the development of political attitudes, opinions, and values." Political culture is a basic consensus for the existence and quality of democracy, which includes "interest in social and political issues".
- (3) Civic education as social competence: Is only effective with the interaction of theoretical knowledge; it includes the readiness to accept responsibility, to develop a judgment and to select predefined or developed policy options.

To summarize, civic education works on aligning the individual to find a way into the political, economic and social turmoils of political life. Civic education is a tool for the defense and development of democracy. Especially in times of advanced globalization, civic education gains in importance. The participation of a democratic political culture, as well as the mediation between individuals, institutions and social organizations are necessary assignments of civic education (Beer/Cremer/Massing 1999: 13-14).

3.2. Discussions about learning democracy

There are various debates and questions about learning democracy which may be answered in terms of philosophy. Learning democracy focuses on the support and participation of active and responsible people in a democratic society. A learning democracy approach is the close relationship between democracy and civic education. Civic education is a future requirement of democracy and can be only effective in a democratic system (Massing 2002:161). Gerhard Himmelman extends the approach and defines learning politics as learning democracy. The word 'politics' is considered by young people as 'dirty business' so the notion of democracy might gain in sympathy. Thus, he combines the notion of democracy with lifestyle, social system and form of rule. And from this three-way split, he goes further and defines the specific tasks and objectives of civic education (Ibid: 167-169). In short, the concept of learning democracy means understanding the function, value and content of democracy. Students are, therefore, able to experience democracy and politics through their own

experiences and actions and understanding and, as a result, develop some abilities when it comes to understanding the notion of democracy (Henkenborg: 284–288).

4. Political Participation

In a representative democracy, the form of government gets its power from the participation of citizens in the political decision-making process (Meyer 2009: 133). If citizens avoid politics, the social system will lose its legitimating function. The forms of political participation are manifold and place different demands on the citizens. We are talking about participation, value consideration and interest enforcement. Examples of political participation are elections, party activities, referendum, strikes or citizens' initiatives (Schultze 2007: 398 ff.). In particular, young people are asked to contribute to politics and to reconcile interests. Thus, it is clear that young people who are active in politics must have basic communicative skills to perceive rules and values easier (Burdewick 2003: 37).

In the context of political debates about the political apathy of young people, questions arise about the political participation of young people and their understanding of policy questions. Discussions about participation are reviewed in the media, especially, if, on election day, young people avoid the ballot box or show no interest in politics, which is considered to be symptomatic of the crisis of democracy and the lack of civic education. At this point, it is necessary to motivate children and teenagers to become politically active. The school, the family and friends are important factors when it comes to explaining political behavior. These peer groups can encourage young people to show a great deal of interest in politics, thereby increasing their willingness to participate politically both in and out of schools (Schwarzer/Zeglovits 2009: 327). It is also reasonable to assume that the political participation of young people depends on social-economic status (Schultze 2007: 399).

In the framework of political participation research, Verba et al. (1995) summarized their findings in a model that explains voluntary participation of citizens in the political system. The model contains three explanatory factors that positively influence political participation. Individually available resources such as time and money can help how citizens participate in politics. The political involvement, such as political interest and political awareness can be classified as a second explanatory factor. The integration into social networks is the third explanatory factor. This determines whether citizens are confronted with details of participation opportunities (Perlot/Zandonella 2009: 427).

To say the young people are uninterested in politics and lack information about politics is a generalization. Based on the results of different studies, it appears that despite different political cultures, going to the polls is perceived as a civic duty. It is also considered to be something which does not warrant a big fuss and requires little information (DeNève 2009: 155). Nevertheless, media consumption has a special influence on the political willingness of participation. The information supply in the media may disorient young people. They are confronted with critical world events and are unable to classify or handle them in everyday life. Hence, they feel overwhelmed and can easily remove themselves from politics (Böhmer 2002: 37–38). Processing information into knowledge is the basis for social action and political participation. At this point, civic education is introduced that should convey the media's portrayal of politics. But what kind of knowledge and which abilities do citizens need to be included in the political system?

The word "knowledge" as opposed to ignorance or being against information indicates a socially validated relation of the psychological system and its environment. In science, knowledge is tested on a probable falsehood. In the education system, knowledge is estimated as an individual knowledge, which means that it represents a form of curriculum vitae. In this context, the mass media serves as a transfer of knowledge for the understanding of information (Luhmann 2002: 98). On the basis of knowledge, other opportunities can be accomplished which provide a goal-oriented direction in the future (Ibid: 97).

To carry out different roles as citizens, you need abilities. The main purpose of civic education is to equip students with political know-how. If you are confronted with political issues or problems, you have to fall back on relevant knowledge. Here, civic education is defined as the "working knowledge"; it is cause-related and has an 'instrumental character'. Abilities expect a working knowledge that is required for the analysis of specific learning subjects. Parts of the working knowledge flow into the expertise and contribute to the development of concepts and the understanding of political categories (Krammer 2009: 19). Thus the concept of competence refers to 'what', based upon which social or policy-didactic expectations are set (Moegling 2008: 29).

5. New Concepts and Opportunities in Civic Education

For a comprehensive, long-term and natural culture of a political participation by young people, different projects are organized to spark the interest of young people for politics and to strengthen their willingness to participate. Those projects and initiatives in the field of civic education and participation which have been initiated will be shown with the EU examples. In the field of civic education, the Council of Europe declared the year 2005 as the "European year for civic education", with the objective of promoting democratic political education through educational activities within EU member states and to encourage those individuals responsible to improve education policy (Kordik 2008: 806). The reason for the launch of the 2005 campaign year was to improve low turnout and lack of participation in young people in public and political life. An important step in the promotion of young people's participation was taken at the EU level with the adoption of the new EU youth strategy of the EU Council. The framework for youth policy cooperation in Europe was governed by 2010 to 2018. Topics of the EU youth strategy are: ⁽²⁾ Education and training, employment and entrepreneurship, volunteer commitment, health and well-being, youth in the world, creativity and culture, non-formal education, participation by young people and social integration. With the EU project "Youth in action" makes a high contribution to the youth participation because it encourages young people to be politically engaged in society and support Europe.

The EU youth strategy also reached its peak in Germany. In 2011, the first results were presented in the framework of a workshop with the title: 'Participation of Young People in a Democratic Europe', where representatives of political institutions, youth associations, different departments of the education ministry and some adults joined forces. The main focus of this workshop was to analyze the measures taken by the EU member countries to support the participation of young people ⁽³⁾.

6. Conclusion

As already noted, the main objective of civic education is to educate students to become mature and capable citizens. Ultimately, democratic societies depend on civic education and political commitment. It is clear that civic education plays a crucial role in the political culture of a modern democracy. At this point, the institution 'school' enters into the picture which is responsible for teaching politics to children and young people and empowering them to become critical and conscious citizens with their own judgment on political participation. However, given an interest in political participation, the mass media is an important link between participation and politics because young people learn politics via the media. Political discussions and conversations with family, friends or at school can affect the knowledge and political engagement in a positive way.

Civic education is and will remain the subject of empirical investigations in the future because it is repeatedly confronted with new challenges to manage key risks of the democratic legal system. Low voter turnouts or growing disinterest in politics by young people are forcing policy makers to consider the central role of civic education in democracy and to make suggestions for improving civic education. There is no doubt that the subject of 'civic education' is not enough to convey pure information about rights and duties in a democracy and to motivate young people politically. Gaining experience in the social environment and active experience with democracy can significantly increase the political commitment of young people. The political participation of young people and reasonable policy making in all areas that affect young people are shaping the future. Given this

situation, politicians are invited to perceive the interests, needs and desires of young people to fight their disenchantment with politics or mere disinterest.

Notes

1 <http://science.v1.orf.at/science/filzmaier/73825>

2 <http://www.jugendpolitikineuropa.de/>

3 http://www.jugendpolitikineuropa.de/downloads/4-20-2942/transfer_prot_Werkstatt_Part_280611.pdf

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Class attendance and use of Echo360 in Australia: A comparison between undergraduate nursing and maritime disciplines

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Abstract

This interdisciplinary study investigated the transformative role of Echo360 lecture capture software on student learning behaviours within the disciplines of nursing, maritime management and engineering at an Australian university. The aim of this study was to examine how students used the system to enhance their learning. A comparison of class attendance and use of Echo360 generated materials revealed limited differences between different disciplines, even though the cohorts were quite diverse. The implications for learning and teaching show the need to be cognisant of generational difference and level of information communication technology skills when developing curriculum.

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Peer-review under responsibility of the Sakarya University.

Keywords: Lecture capture; generation; class attendance; Echo360; learning and teaching.

Introduction

Educational technology has led to a fundamental change in pedagogy and curriculum design (Loveless & Ellis 2013). More than 60 per cent of Australian universities have used Echo360 lecture capture software significantly in their lecture theatres and classrooms, many capturing over 1,000 hours of lectures each week (NetSpot 2011). Although there are many benefits associated with the use of Echo360 in learning and teaching (Brogan 2009; Davies & Hardman 2010; Shaw & Molnar 2011), its patronage among lecturers is quite limited due to concerns about its negative impact on student attendance and classroom interaction (Billings-Gagliardi & Mazor 2007; Devadoss & Foltz 1996; Kottasz 2005). This cross-sectional study investigated the impact of Echo360 lecture capture software on the student learning behaviour of class attendance within the disciplines of nursing, maritime management and engineering at an Australian university. The relationship between the demographic characteristics, class attendance and availability of Echo360 generated materials were investigated within these disciplines.

1. Background

Research on how educational technology influences class attendance of students is limited (Massingham & Herrington 2006). Realising the positive impact higher class attendance may have on student performance (Romer 1993), Moore, Armstrong and Pearson (2008) proposed the need to further investigate the impact of virtual learning solutions, supported by using the internet, on class attendance. Although emerging educational technologies have improved accessibility to course materials, this does not necessarily translate into better

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performance by students (Marburger 2006). Other moderating factors include age, learning discipline and level of motivation; which determines the extent to which a given student is engaged in the learning process (von Konsky, Ivins & Gribble 2009). It appears class attendance cannot be regarded alone for improved student performance.

There are other aspects such as accessibility offered by educational technology that could contribute to improved student performance (Cradler et al. 2002; Massingham & Herrington 2006). With access to resources external to the traditional classroom environment, students have increased flexibility to choose when to engage with the learning resources (Brogan 2009; Phillips et al. 2010). Increased flexibility meets the needs of students with family-related commitments (Muir 2009) but it can be abused (von Konsky, Ivins & Gribble 2009). Students may intend to listen to recorded lectures but may fail to do so. As a result, it becomes difficult for them to remain abreast with learning modules within a particular unit which may ultimately affect their performance in the long term (Bell et al. 2001).

Use of educational technology to improve access to course materials can be advantageous to students with part-time work commitments (Muir 2009). This is particularly relevant in Australia where recent studies (Applegate & Daly 2006; Manthei & Gilmore 2005; McInnis & Hartley 2002) suggested that over 72% of university students were engaged in part-time work and require learning schedules that suits these commitments. The drawback for this cohort of students was the limited interaction offered by the captured lecture videos. Accessibility may encourage truancy among students (Naber & Köhle 2004) as the alternative source of information has been linked to lower attendance rates (Friedman, Rodriguez & McComb 2001; Grabe, Christopherson & Douglas 2005). Other researchers (Billings-Gagliardi & Mazor 2007) share an opposing view. Massingham and Herrington (2006) asserted students characters had influence over absenteeism compared to the accessibility to learning materials. Given the drawbacks of improved accessibility, research to investigate the frequency with which an absentee student access learning materials online could provide an additional dimension for design of learning and teaching resources. Settle, Dettori and Davidson (2011) believed future educational technologies needs to be able to effectively monitor and report on these students.

Previous studies suggest that educational technology may impact positively or negatively on the attitudes and learning behaviours of students (Billings-Gagliardi & Mazor 2007; Massingham & Herrington 2006; von Konsky, Ivins & Gribble 2009). Principally, educational technology could influence student motivation, their class attendance (Fei et al. 2013) and learning outcomes (Billings-Gagliardi & Mazor 2007; Colby 2004). Massingham and Herrington (2006) concluded that educators should focus on how to harness existing technologies to improve the learning and teaching behaviours of stakeholders. Authors claim lecture capture systems such as Echo360 software impact on the learning behaviour of students when introduced into the teaching environment (Mark, Vogel & Wong 2010).

During 2011, this University began using Echo360 software. Early in 2012 there were 419 units using the software representing half of online units, but less than 10% of total units being offered. There were 232 units (55%) using the system in one or more of the 30 enabled venues, and 187 units (45%) used in non-enabled and personal capture venues. The level of usage varied significantly across schools in the university. The discipline of nursing had high usage, whereas other disciplines including maritime units used the system less. This study explored the effect of the availability of Echo360 generated materials on class attendance in nursing, maritime management and engineering.

Methodology

An invitation was sent to students enrolled in eight units across nursing, maritime engineering and management. Research Ethics for this study was approved (H13290). A digital survey (Survey Monkey) was developed for use in this cross-sectional study and consent to participate was by completion of the questionnaire (Buchanan & Hvizdak 2009; Marra & Bogue 2006). Five-point Likert scale and free text questions were used to elicit understanding of how students used materials generated from the Echo360 platform alongside traditional lectures. Questions in the web-based survey included how students used Echo360 generated materials and

whether access influenced their learning behaviour. Two reminders were provided to students by posting news items within the online learning management system used by this University.

Statistical analysis was undertaken using SPSS Version 21 (IBM Corp. 2012). Descriptive and two-sided chi-squared analysis was undertaken to generate p-values to establish whether differences existed between maritime and nursing cohorts. Fisher's exact test was used where cell counts were less than five (Agresti 1992; Fisher 1922). All tests were conducted using a two-sided alpha level of 0.05.

Results

An invitation to participate was sent by email to 841 undergraduate students. The pooled cohort response was 43%. Of the valid responses, 218 were from nursing (n=298) and 50 were from the maritime disciplines (n=64). There were 268 valid responses from 362 participants as incomplete data sets were excluded from the Echo360 software question analysis.

Table 1. Demographic information of respondents by discipline

Item		Nursing	Maritime	All Respondents	p-value
Gender	Male	43 (52%)	39 (48%)	82	.000
	Female	174 (94%)	11 (6%)	185	
Age	Under 31	42 (58%)	30 (42%)	72	.000
	Over 31	176 (90%)	20 (10%)	196	
English as first language		144 (80%)	36 (20%)	180	.468

Gender, age and English as first language were different for the two cohorts of respondents. Of those who responded, there were more than twice as many females as males (Table 1). The age profile of both nursing and the maritime discipline was different where over 90% of respondents in nursing and only 10% in the maritime disciplines were over 31 years of age. In nursing, 80% of respondents indicated that English was their first language compared to 20% from the maritime disciplines (Table 1).

Table 2. List of items related to class attendance and relevance of support for use of Echo360 software

Item number	Item (description)
A1	Due to the availability of captured lecture sessions, I am not worried about missing classes
A2	I still rely on recorded videos of class sessions I might have attended physically
A3	I am not motivated to attend lectures due to the availability of recorded lecture sessions
A4	I use Echo360 for assisting revision during study week for examination
C1	Students need support from teaching staff on how to effectively use the Echo360 facility
C2	Lack of technical and student support services will have a negative impact on the Echo360's effectiveness

Table 3. Effect of availability of Echo360 on class attendance by discipline

Item	Nursing SD	D	N	A	SA	T	Maritime SD	D	N	A	SA	T	p value
A1	11 4.7%	58 24.6%	49 20.8%	80 33.9%	38 16.1%	236 100%	6 11.8%	14 27.5%	15 29.4%	10 19.6%	6 11.8%	51 100%*	.077
A2	10 4.3%	24 10.3%	42 17.9%	114 48.7%	44 18.8	234 100%	6 12.0%	8 16.0%	13 26.0%	13 26.0%	10 20.0%	50 100%	.014
A3	38 16.2%	101 43.0%	38 16.2%	41 17.4%	17 7.2%	235 100%	24 47.1%	8 15.7%	9 17.6%	5 9.8%	5 9.8%	51 100%	.000
A4	5 2.1%	10 4.3%	20 8.5%	97 41.5%	102 43.6%	234 100%	3 5.9%	6 11.8%	7 13.7%	18 35.3%	17 33.3%	51 100%	.054

SD: strongly disagree; D: disagree; N: neither agree or disagree; A: agree; SA: strongly agree; T: total

*May not equal 100%, due to rounding

Table 2 lists the survey items. Table 3 shows the effect of Echo360 availability on class attendance by discipline. There was no difference in nursing or maritime disciplines in their use of Echo360 with regard to missing lectures and using Echo360 software for revision during study week for examination. There was a difference in the cohorts in their reliance on recorded class sessions and motivation to attend lectures. Nursing students were more likely to agree (67.5%) than maritime students (46%) that they still rely on recorded videos of class sessions they might have attended physically. Maritime students strongly disagreed (47.1%) and nursing students disagreed (43%) that they were not motivated to attend lectures due to the availability of recorded lecture sessions.

Table 4. Relevance of support for use of Echo360 software by discipline

Item	Nursing VI	I	N	R	VR	T	Maritime VI	I	N	R	VR	T	p value
C1	1 0.5%	11 5.1%	48 22.4%	103 48.1%	51 23.8%	214 100.0%	4 8.0%	2 4.0%	14 28.0%	18 36.0%	12 24.0%	50 100.0%	.007
C2	2 0.9%	5 2.4%	53 25.0%	95 44.8%	57 26.9%	212 100.0%	2 4.0%	4 8.0%	21 42.0%	10 20.0%	13 26.0%	50 100.0%	.002

VI: very irrelevant; I: irrelevant; N: neither relevant or irrelevant; R: relevant; VR: very relevant; T: total

Support from teaching staff and lack of technical support between the cohorts were different (Table 4). Nursing students indicated that it was relevant or very relevant (71.9%) to have support from teaching staff on how to use Echo360 and that lack of support had a negative effect on learning (71.7%). Conversely the maritime discipline students were ambivalent about support from teaching staff (42%) or lack of technical support (42%) affecting their learning using Echo360 generated materials.

Discussion

The main findings of this study were gender, age and English as first language were different for nursing and maritime disciplines. Almost two-thirds of all respondents indicated they were motivated to attend class even

though Echo360 generated materials were available which supports the findings of other studies (Billings-Gagliardi & Mazor 2007; Briggs 2007; Copley 2007). Of those who responded, more than twice as many females completed the survey than males (25%) (Table 1). Within the nursing cohort, the proportion was similar to workforce statistics (HWA 2013) where males are underrepresented (Table 1). The age profile of both nursing and maritime disciplines were different, where over 90% of respondents in nursing and only 10% in the maritime disciplines were over 31 years of age. This study shows that the technological inclination of the current student cohort especially those in Generation Y born between 1978 -1994 and Generation X born between 1965 -1977 may not be technologically inclined and prefer other modes of lecture delivery. Davies and Hardman (2010) found that this category of students may not be able to take advantage of the accessibility and flexibility offered by lecture capture technologies. Unfamiliarity with technology must be considered by tertiary education providers when introducing learning and teaching technologies into the curriculum (Duderstadt 2000).

Support from teaching staff and lack of technical support between the cohorts were different. Nursing students indicated it was relevant to have support from teaching staff on how to use Echo360 and that lack of support impacted negatively on their learning. Conversely students from the maritime disciplines indicated teaching or technical support was less relevant to their learning using Echo360 generated materials than the nursing cohort. Educational learning solutions need to contribute to the technological competence of many students and prepare them for the current computer-oriented job market (Fahy 2008).

The age difference and relevance of support to use Echo360 software reported between the cohorts, shows there are implications for learning and teaching to ensure curriculum design and development is cognisant of generational difference and level of information communication technology skills. Clark (2001) argued that given the continuing dynamism within learning environments and an increasingly diversified student population, education providers needed to frequently revise course content, and methods of delivery to accommodate these changes. The varying learning needs of students needs to be directed towards teaching styles, delivery methods and curriculum design (Anderson 2006). Additionally, the need for information communication technology competency within health care environments has burgeoned and graduate nurses are expected to be work-ready, including digital literacy (Mather, Marlow & Cummings 2013; Mather 2012). This study showed that information communication technology competence remains unaddressed within the undergraduate nursing curriculum. Conversely the maritime cohorts were predominantly students who were born after 1984 and known as Millennials (Oblinger 2003), that reported educational and support services were not relevant to them.

In nursing 80% of respondents and in the maritime disciplines only 20% indicated that English was their first language (Table 1). These demographic differences did not alter student motivation for class attendance. Both cohorts were similar in the distribution of responses to the question regarding availability of Echo360 if they missed class. Students also indicated they used Echo360 generated materials for assisting revision during study week. These findings suggest that student behaviour is similar regardless of linguistic diversity (Ramburuth & McCormick 2001).

Although the cohorts were quite different Table 3 shows the effect of Echo360 on class attendance by discipline. There was a difference in the cohorts in their reliance on recorded class sessions. Both cohorts agreed they were motivated to attend class even though Echo360 generated materials were available. The cohorts were different in their level of disagreement with the statement about lack of motivation. The maritime students were more strident and strongly disagreed that they were less motivated to attend class, whereas the nursing students only disagreed.

4.1. Future directions

The majority of respondents indicated they were motivated to attend class and the continuation of recording classes for revision and review is recommended. Further exploration of factors that motivate class attendance by students may provide information that can also be embedded into online delivery. The use of Echo360 software has enhanced the learning opportunities for students in both the nursing and maritime disciplines. Future directions indicate that if Echo360 software is to be further integrated into the curriculum the learning institution needs to offer students opportunities to learn how to use the technology, so that their learning is not impeded.

Previous studies suggested that lecture recordings encouraged medical students with Asian backgrounds to achieve improved grades due to the availability and frequent access to lecture recordings (Shaw & Molnar 2011). Thus, further investigation of the impact of availability and the use of Echo360 generated materials for students with diverse cultural and linguistic backgrounds is warranted. These students who may not have English as their first language may use Echo360 differently to students who are learning in their first language.

2. Limitations

This study had several limitations. The cohort sizes between disciplines were different. More than three-quarters of students invited to participate were from nursing (n=682) and the remainder were from the maritime disciplines (n=159). Additionally, respondents self-selected to complete the survey, which may have caused respondent bias and the findings may not be generalizable to other undergraduate courses.

Conclusion

In conclusion, this study showed that student behaviour towards class attendance is similar regardless of discipline, age or English as first language. It also showed that student motivation to attend class was high with maritime students being more strident in their opinion that the availability of Echo360 generated materials did not reduce their motivation to attend class. Nursing students indicated that teacher and technical support impacted on the use and effectiveness Echo360 software. Higher education institutions need to provide opportunities to support all students to become information communication technology competent. Opportunities will ensure they are able to access the learning resources required to successfully complete their studies and become work-ready.

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Classroom community: a mixed method study in a doctoral educational program

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Abstract

The following research measures the level of classroom community from a course of a doctoral program from the north of Mexico, using an instrument created by Rovai (2002). This instrument reveals the levels of connectedness and learning scores that conforms the classroom community scale score. With a mixed method study, the following research includes a survey and two semi-structure interviews from one doctoral student member of the PhD in education and a tutor from one of the courses of the PhD program, who had contact and teaching experience with the group of doctoral students. Within the analysis of the interaction between the doctoral students, two examples of the discussion forums are also included with the intention to reveal the level of classroom community by gender and the specific characteristics in the performances of the doctoral students of the course selected. The problematic situations experienced by the doctoral students are explained offering contextual justifications of the research problem linking this context with arguments by experts in the field.

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Peer-review under responsibility of the Sakarya University.

Keywords: Classroom Community; Connectedness; Learning; Blended course; Education.

Introduction

The course selected in this study is part of a doctoral education program offered by a public educational school of master's and doctoral program in the North West part of Mexico. The doctoral program was first released on January of 2010. This program is composed of twelve blended courses. In order for a candidate to be accepted, he or she should full fill a profile considering a high level of achievement in an educational field such as: teaching experience, administrative background and/or previous studies in the education with a certified degree in education.

1.1 Description of the community, object of the research

In terms of the acceptance process, each candidate has to present a complete filed with the following requirements: certified degree of a master in education or area related to the education background, legal papers such as birth certificate, certificates of a professional degree, three letters of recommendation from education professionals, a written anti project to be develop along the doctoral program and the accreditation of the domain of two foreign languages such as English and French. As well as the commitment of presenting at least three participations in national and/or international congresses or seminars and publishing at least one article in an arbitrate journal in the field.

The blended course selected for this study is *Telematic Web in an online Education* taken by the first generation of seven doctoral students for a period of nine weeks. The main objective of this study is to measure the level of community classroom connectedness and learning score using an instrument by Alfred P. Rovai

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(2002), as well as open questions in a survey given to the seven participants, at the end of the course mentioned; one of the seven discussion groups develop during the course is presented as an example of the collaborative activities offered in the course, revealing the quality of interaction given and level of connection between peers during the course.

1.2 Nature of the research problem

Even though doctoral students are selected as a result of a high demanding process, some PhD students have a misconception about what a scholarly research demands according to existing scientific standards in the field. In other cases, they might also have a culturally driven spontaneous representation about the PhD process. Therefore, they should achieve a high level of competence in relation to theories and methodological research, in order to succeed in their doctoral formation (Halto, Stubb & Lonka, 2009). These situations might provoke in some doctoral students a significant level of stress and exhaustion. In some researches, women doctoral students reported more stress than men (Kurtz-Costes et al. 2006; Toews et al. 1993, 1997; Ulku-Steiner, Kurt-Costes and Kinlaw, 2000).

Maslach and Goldberg cited by Stub, Pyhalto & Lonka (2011) differentiated three elements that together constitute burnout; these are emotional exhaustion, cynicism and reduced sense of efficacy. According to Cole, Bernerth, Walter & Holt (2010), Hakanen, Bakker & Williams (2006), as well as Maslach (2003), the sense of emotional exhaustion, cynicism and a reduce sense of efficacy are emerge from a heavy work load, any social conflict between peers as well as a lack of supporting resources from professors and any experienced organizational injustice lived within the program and or their relationship with their academic authorities.

The mentioned sense of emotional exhaustion, cynicism and a reduce sense of efficacy can be found in the transcripts of several segments of the discussion groups activities included in this research. It is believed that a heavy work load of some doctoral students in their working field as mentioned in private conversations with the tutor of the course as the main reason for their low level of attendance in the course, as well as the low level of efficiency in their messages in terms of the number of participations and the correct cite of authors in APA.

The stress and exhaustion that some doctoral students might experience may arise from a mismatch between the individual student and the scholarly community (Stub, Pyhalto & Lonka). The term of scholarly community has a multi-layered learning community according to Nummenmaa cited by Stub, Pyhalto & Lonka (2011).

In a wide level of scholarly community we can find the concept of discipline found in the international community of researchers that promote the development of new knowledge in the disciplines regarding the participation in journals and conference meetings. The second level found in the term of scholarly community would be the organizational level where universities, faculties and departments promote the integration of doctoral students with various communities of practices within the scholarly communities itself, such as research groups, seminars and peer study groups (Stub, Pyhalto & Lonka, 2011).

When a doctoral candidate is also an expert professional in their field, as well as students, the supervision relationship is likely to be more one of peer interaction. In this case, the supervisor is required to gently bring down the student from their professional pedestal, as a process of status 'deconstruction', in order that they can progress as a researcher. For this to be done effectively and sensitively, the supervisor must recognize the student's potential vulnerability in the learning role (Watts, 2009, p. 3)

According to Lee (2008), the supervision role has five dimensions that offer a conceptual critique of his/her functions. The first is identifying the functional aspects of the project management giving the adequate support. The second is the enculturation where the supervisor should encourage the doctoral student to become a member of the academic community. The critical thinking, as a third element, would be to encourage the doctoral student to question and analyse all the academic resources presented to him/her. The emancipation, as the fourth element, would be to question and develop by themselves as a new researcher and as a fifth element; the doctoral student should develop a quality relationship with its supervisor feeling inspired and taken care of.

The critical thinking, the emancipation as well as strong relationship between doctoral students and their supervisor can develop within the interaction of threaded discussions in web-based courses. Garrison, Anderson & Archer (2001) assure that interaction between peers and facilitators plays a role providing thinking skills such as critical thinking, elevating the learning process of the participants.

The composition of group team in web-based thread discussions could be composed homogeneously or

heterogeneously based on their characteristics such as the learner's prior knowledge on a specific topic, its learning abilities, gender and or level of efficacy (Lee & Lee, 2006). In this sense, the collaborative activities in a web-based course such as the discussions groups, might improve the integration process and elevate their level of motivation, which would lead to a higher involvement in the course work having a significant level of persistence (Poellhuber, Chomienne & Karsenti, 2008).

The persistence in distance education has been linked to different variables such as the institutional variables understood as the specific learner's support characteristics as well as the design of the course itself. On the other hand, there are environmental variables such as the time dedicated to attend the courses demands, life changes in the doctoral students as well as the context in their own social environment. The demographic variables are key elements to be taken into consideration such as their gender, age, employment status as well as their academic background (Bourdages & Delmotte, 2001).

1.3 Defining the research problem

1.3.1. Antecedents of the course

The Course "Telematic Web in an online Education" was design with a constructive methodology using the collaborative learning and the learning based on projects where the doctoral students had to produce four main products in a period of nine weeks.

In product no. 1, the participant had to prepare and present in a face to face session the theme of study previously selected by each doctoral student, in an activity conducted on the platform, specifying the main objective to reach by the future participants in a threaded discussion group developing certain contents, activities and arguments with the accurate cite of resources given before hand by the tutor in the discussion group held per week.

Since the number of seven participants in the first generation taking the course allowed the design of seven threaded discussion groups with the following themes: Foundation to design multimedia & hypertext resources for the Telematic Web, Resources & academic material available in the Web, Collaborative work in the Telematic Web. The Web 2.0 & the use of Social Web Net for the personal learning, Resources for the educational innovation & didactic strategies in the university formation using the Web: Webquest, Weblogs, Wiki...The use of the Case Method & Learning based on Projects in the Telematic Web Courses, The evaluation in the Telematic Web-based courses & use of tools to create exams and The electronic portfolio as an evaluating strategy used by students in the Telematic Web-based courses.

For product no. 2, the doctoral students formulated questions to detonate a thread discussion forum per week, each student changed roles from a doctoral student to the tutor of the discussion group, applying the functions of a tutor in an online course; guiding and directing the interactions of the rest of the participants. In these new roles, different situations emerged from the participants sometimes challenging the integrations of the members as well as learning by doing and applying the new roles in a collaborative learning activities. The product 2 was evaluated and authorized by the titular of the course having the feedback along the process in order to be able to achieve the goals and objectives offered in each discussion group per week.

The product no. 3 consisted of the list of bibliographic resources read and used in each discussion forum were each tutor/student had the freedom of selecting the best resources using academic Web sites, Online Digital Libraries, Videos, Audios and variables material such as slide shares, conferences and seminars from prestigious international universities and educational centers. With a minimum of seven resources, each doctoral student had to present his/her list for evaluation and approval from the tutor of the course.

The product no. 4 was a combined product considered a final assignment, were each doctoral student had to write a summary of the interactions and development of his/her discussion group, published this paper in a Web Blog created and activated by the tutor of the course, as well as a written paper with the standard format of a proposal article to be publish by an educational journal.

1.3.2. Situations and context of the research problem

Even though the course offered, in the first week, an introductory chapter with material regarding the

functions and roles of a tutor in an online environment; some doctoral students had a difficult time assuming the different role becoming a tutor with his/her own peers. For starters, some participants had trouble formulating their products 1, 2 and 3. Five out of seven doctoral students had to have an extension in their deadline in order to submit their products. Because the developments of these products were essential in the formulating and design of the discussion groups, the tutor of the course had to make the concession mentioned.

Taking into consideration the academic backgrounds of the group, three out of seven doctoral students do not have teaching experience in an online or blended modality; they presented the products 1 and 2 with significant limitations and poor instructional designs in terms of a collaborative learning activity with clear instructions and an adequate question to provoke a debate in their discussion groups. Since in each week, each participant had a chance to co-evaluate his/her peer in the role of a tutor, a low grading was commonly found in the group. In this regard, a significant division in the group was appreciated, having an unofficial team of two vs. five doctoral students. The grading of peers did not match the criteria and evaluation of the tutor who had to interact with the group in private communications via emails and videoconferences with the seven participants along the course.

1.3.3. The research problem

In any online and blended course, the level of community should be taken into considerations understanding the influence this have in terms of the quality of the interactions as well as their level of learning from a cognitive and affective perspective. The level of integration with the seven doctoral students along the discussion groups was fragmented by a series of misunderstanding having to redirect their interventions. Once the guideline was posted, the group could achieve the objectives and goals previously posted in each discussion groups. Examples of interactions in discussion groups in the course, took place between males and females, revealing the level of community with in the doctoral group:

Example A

In one of the discussion groups, where one of the seven doctoral students had the role of the tutor, he/she has an active intervention with one of the students discussing his/her arguments and opinions. At one point, the student in the role of tutor, discourage the participations and point it out mistakes of the personal point of view of the student.

According to the rules of Netiquette, a tutor should encourage an active participation of the students without degrading opinions using accurate and polite written messages in order to maintain a high level of interaction with in the group in the discussion group. On the other hand, the tutor should encourage all students to answer and maintain the interaction letting the student respond for themselves, keeping in mind that the interaction in terms of the messages posted in Phase 1 (interaction between peers) should be keep within the group of students.

When an argument related to the question posted is answered in an irregular o poor level of argumentation, the tutor has the responsibility to give the accurate feedback and instruct the student to add a new message with a better quality, in order to increase the level of learning within the community, by email or a personal posted message outside the discussion group, keeping this communication in a one-to-one bases.

Example B

In a second discussion group, the doctoral student in the role of the tutor point out the need of presenting active links in the message posted by a peer. The student, forgetting the role student interacting with a colleague as a tutor, underestimated the comment and answered back with sarcasms arguments stating that the link was taken from a prestigious data base with restricted access to members only.

Taking into consideration the rules given to the doctoral students in pass discussion groups, it was well known to the group that all links posted in a discussion group should had open access to others in order to share relevant academic information, increasing the collaborative learning and skills in relation to the dynamics of an academic discussion group with an outstanding quality.

In response to this situations, the actions taken by the Professor in the course, taking into consideration the different profiles and academic backgrounds of the doctoral students, the strategies applied by the tutor of the course were to facilitate the spaces to express their opinions and listen to the claims of each participant; applying a constructive learning approach as well as the activities with a collaborative learning methodology, the interactions between peers and facilitator could happened with an efficient and efficacy results, as the products

and assignments were evaluated.

Two surveys were applied at the end of the course to measure the level of integration and classroom community, as well as open questions to inquire the perception of the doctoral students in regards of the situations lived during their learning process in the course.

Objective: Is the level of Classroom Community the same or different between genders in the doctoral students in the course?

Therefore, the **Null Hypothesis** is H_0 = The Classroom Community Scale Score is equal between Males and Females.

The **Alternative Hypothesis** is H_1 = The Classroom Community Scale Score is different between Males and Females.

1.4 Type of research

The methodology applied in this research is a mixed approach. Using a reliable and validated instrument for the quantitative section, the research team proceeded to apply a survey with semi-structural open questions, as well as an interview to a member of the doctoral student group, gathering data for the qualitative section of the research.

Taking into consideration the role of the researchers in the studied course, being one the tutor of the doctoral course and the other one, one of the members of the student group, they had open access to information within their own experiences as well as the interaction with the rest of the participants in terms of the several interactions that had taken place via email, by video conferences and the discussion groups.

1.5 Population and sampling

Total number of doctoral students is seven, where 42.86% are Male and 57.14% are Female as far as the age of the sample ranges are between: 40 to 50 years 57.14% and 50 to 60 years 42.86 %.

In terms of years of experience teaching in higher education the sample is conformed as follows: Three doctoral students have between 0 to 5 years of experience, Two doctoral students have between 16 to 20 years of experience, One doctoral student has between 21 to 25 years of experience and One doctoral student has between 26 to 30 years of experience.

The hours dedicated to the course in platform according to the doctoral student's perception the range is as follows: Three doctoral students claim to work between 11 to 15 hours per week, two doctoral students claim to work between 16 to 20 hours per week and two doctoral students claim to work between 20 or more hour per week. According to the tracking in the platform, record available to the tutor of the course, the numbers of entrances to the platform in the total nine weeks are:

Table 1. Tracking of doctoral students in platform with final grade.

Doctoral Student	Total Entrances in platform	Entrance per week	Entrances in Discussion Group no. 3	Final grade
# 4	5,816	646	321 role: Tutor	A+
# 6	4,153	461	236 role: Student	A+
# 2	2,906	323	187 role: Student	A-
# 5	2,717	302	144 role: Student	B+
# 7	2,505	278	151 role: Student	A+
# 3	2,434	270	165 role: Student	A
# 1	1,914	213	90 role: Student	B+

Note. Data obtained by the tutor of the course, taken from the platform of the doctoral course. 2013.

1.6 Instruments and its validation

Using the instrument Classroom Community Scale by Alfred P. Rovai (2002), version of 20 items, we could measure the connectedness subscale score and the learning subscale score, as well as the Classroom Community Scale, by adding up the total of 20 items.

In a general perspective, the items question the optical point of view in terms of caring and connections between peers that will allow the doctoral students to feel as part of a classroom community. This spirit of being a part of a community can be compared as a family having an easy exposing of interest, questions and understanding without the feeling of isolation or uncertainty within peers. Having these all, the doctoral students will have a high level of learning in a cognitive and affective level.

Applying a one way analysis of variance, we could obtain data regarding the instrument applied from the perspective of gender. The Cronbach's coefficient for the full Classroom Community Scale was .93, indicating excellent reliability. Additionally, the author of the instrument obtains internal consistency for each of the two subscales. Cronbach's coefficient for the connectedness subscale was .92, also indicating excellent reliability. Cronbach's coefficient for the learning subscale was .87, indicating good reliability.

A survey was presented to the doctoral students with open questions regarding their perspective of connection and integration with other peers as well as the suggestions to improve the level of interaction and collaborative learning activities. The interviews were design using a semi-structural format using as a guide the concepts questions in the instruments applied, as well as the open questions previously applied to the doctoral students. On the other hand, transcripts of emails and videos of the videoconferences with the tutor and between peers were analyzed obtaining data from the perspective point of view of the doctoral students. This information was taken into consideration complementing the information gathered during this research.

1.7 Ethics - protecting privacy of participants

All the names of the participants, members as doctoral student are kept anonymous. Pseudonymous are used to refer to them as doctoral student 1, doctoral student 2, etc... The transcripts of emails, interviews and recordings of video conferences are been kept by the researchers team and will remain as confidential material, protecting the rights of all the participants of the course studied. Furthermore, the name of the educational institution remains unknown protecting the privacy of all its members as well as the academic and administrative staff who were, are and will be part in this educational doctoral program.

2 Results

2.1 Quantitative Phase

For the quantitative section of this study, a one way analysis of variance, in the SPSS v. 18, was used to determine if there was a difference between genders in the classroom community scale score in the course *Telematic Web in online Education* of a doctoral program. The analysis did not showed a significant difference among genders ($F(1, 5) = .144$, $p > 0.05$ in terms of the classroom community scale score. Having an $F = .144$ being less than 6.61, we accept the null hypothesis and reject the alternative hypothesis. Therefore, there is no significant difference between the level of classroom community scale score between males and females doctoral students in the course analyzed.

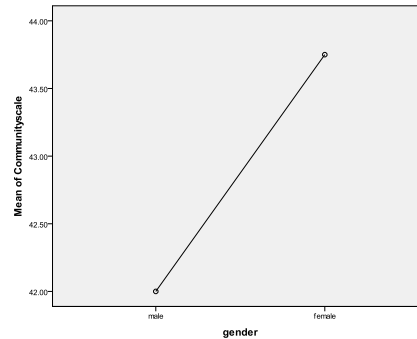
Even though the null hypothesis is accepted, in terms of the level of community the perspective of the doctoral students, 57 % believe the disagreement in terms of feeling the care between each other, as well as a lack of spirit of a community. 42% feels an unfamiliar atmosphere where 56% strongly believe an uneasy exposing gap expressing their understanding, where 42% doctoral students do not help them learn as well as a lack of support between peers in their learning experience.

Table 2. ANOVA Results in SPSS

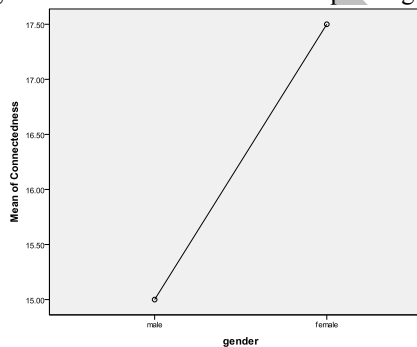
		<i>Sum of Squares</i>	<i>df</i>	<i>Mean Square</i>	<i>F</i>	<i>Sig.</i>
Community scale	Between Groups	5.250	1	5.250	.144	.720
	Within Groups	182.750	5	36.550		

Connectedness	Total	188.000	6			
	Between Groups	10.714	1	10.714	.974	.369
	Within Groups	55.000	5	11.000		
learning	Total	65.714	6			
	Between Groups	.964	1	.964	.021	.890
	Within Groups	226.750	5	45.350		
	Total	227.714	6			

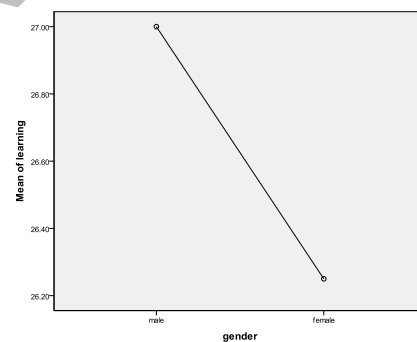
Note. Data obtained with the results in the SPSS program, taken from the instrument applied to the doctoral students. 2013.



In terms of the mean of the classroom community scale score the 3 males score a total of 42 points, where the females score a total of 43.7 points. Therefore, we can say the females would have a perspective of a higher level of classroom community, even though the difference would not be quite significant.



In terms of the mean of connectedness the males score a total of 15 points, where females score a total of 17.5 points. So, according to the perspective view the females had a higher level of sense of connectedness, considering the score gathered in the male group.



In terms of the mean in the learning scale score, the males score 27 and the females score 26.2; therefore the males had a higher perspective level of sense of learning along the course.

2.2 Qualitative Phase

2.2.1 Interview to a Doctoral Student

For the qualitative section of the study, one interview to a Doctoral Student was conducted by the researcher's team with a semi-structured questionnaire, including the open questions offered in the survey applied at the end of the course showing the following data:

1. - What cause(s) might provoke a lack of classroom community?

Doctoral Student 4:

"The differences in profiles of the doctoral students where some may not have an educational background similar to others in terms of teaching experience or a degree in the educational field would cause difficulties in the discussion forums in the complexion of the arguments and concepts submitted.

The limited responsibility taken towards the doctoral program as well as the lack of collaborative approach between peers would be a heavy load of work for the academic staff demanding a constant supervision and redirection of actions towards the doctoral student's participations along the courses.

The need to apply regulations and sanctions in terms of plagiarisms and low level of proficiency in assignments and products submitted in the doctoral courses. In this sense, the flexibility of the tutors should be equal towards all the doctoral students to avoid significant differences in terms of grading and evaluations between them."

2. - Does the causes mention affect the learning process in the doctoral program?

Doctoral Student 4:

"Yes, they do. When the group is not committed with a high level of responsibility and active performances, the learning process would be limited. In terms of all the collaborative learning activities, the outcome would be poor or not as good as expected. Therefore, the tutor should be aware of these situations and apply the needed corrective actions toward these problems."

3. - What changes in the doctoral program would you suggest?

Doctoral Student 4:

"Apply the regulations and ethical code to all the doctoral students when needed. Also, increase the level of standards in terms of excellence in assignments, products, participations in discussion forums, seminars and educational congress, as expected in a doctoral program. As well as, offering of a program of training courses to support deficiencies found in the doctoral students as the right applications of APA, writing and composition skills for academic papers and exposure to more seminars and educational congress with the financial support of scholarships from the academic authorities."

4. - Order the following entities using the numbers 1 through 6, in order of greater to least level of responsibility of a lack of classroom community and/or connectedness between peers in a doctoral blended course and explain the reasons of your choices.

The number 1 represents a higher level of responsibility and the number 6 the least level of responsibility:

Doctoral Student 4:

(1) Tutors, (2) Doctoral Student, (3) Academic Director(s), (4) Administrative Staff , (5) Doctoral Committee, (6) Boarder of Education

Justifications of your choice:

Doctoral Student 4:

"The tutors are the main entities responsible of controlling and/or redirecting situations of negative impact within the interactions between peers and tutor-doctoral students.

In this sense, the academic staff should be able to promote a collaborative learning agenda in their courses as well as promoting the spaces to develop the different learning and teaching areas in a constructive atmosphere in regards of a significant learning process.

But also, in the same level should be the level of responsibility and auto-motivation from the doctoral students. Since the main actor of promoting a real auto-learning process must come from the doctoral students, the transforming performance of an academic participant should be in pace rhythm to achieve an effective and efficient learning experience in an amateur researcher that a doctoral student should become.

In a second level, the academic directors and administrative staff should work together in promoting the applications of regulations and ethic codes, with the main objective of providing the adequate context to develop such goals.

Furthermore, the doctoral committee should monitor the process of each and every one of the doctoral students in order to provide the best feedback and support regarding the transformation of areas of opportunities into strengths to all of them.

The Boarder of Education, the only external entity in terms of the educational process of a doctoral education program, besides giving the legal accreditation of the doctoral programs and financial aids, should also provide support from experts in the educational field making sure the best application of the PhD programs with all its implications are taking care of.”

5. - Finally, in a general sense, what relevant situation do you remember and keep from the course recently taken?

Doctoral Student 4:

“The need of supervision and redirection of the doctoral Students from the tutors in a standardize regulation and ethical code applied in the doctoral program in order to have a rich and profound debate in the discussion forums.

When the doctoral students do not have a clear idea of the quality required in the messages submitted in terms of the accurate bibliographical references in APA as well as complex and profound arguments, the learning process of all the doctoral students is jeopardize.

In the discussion forum tutored by myself, I realized some members of the group did not have a high level of domain of English; since all my bibliographic references, specially the two recorded video conferences from the Columbia University demanded a careful attention and analysis of what was spoken then, I believe they must improve their level of domain of this language since we are constantly reading and using educational material in this foreign language.”

Table 3. Data from the survey

Doctoral Student	Commentaries
# 4	Include a document with the tutor's functions in a discussion group; perhaps explaining the ideal message in terms of a format, reply and further replies in order to standardize criteria. In this sense, it is relevant to consider demanding a higher number of messages submitted in the discussion groups in order to have a real debate, taking care of the quality of them in terms of the arguments and cites of the bibliographical references in APA. I believe that in a doctoral program these kinds of mistakes are not acceptable, considering we are ending the fourth semester of the doctoral program. The quality of the doctoral students should be equal towards the advance of their academic formation.

Note: Data obtained in the survey applied to the doctoral group in the closing session.

2.2.2 Interview to a Tutor from the Doctoral Program

The following interview to a tutor who has had the previous experience in another course, part of the doctoral program, answered the following semi-structured questionnaire related to the level of connectedness and classroom community of the group, by email:

Table 4. Comments from the interview to a Tutor

Doctoral Student	What is the profile of each doctoral Student according to your experience? , How would you describe the performance of each doctoral student in your course? , Could you mention areas of opportunities, of each doctoral student, as relevant tasks to succeed in their doctoral development? & Could you mention the strength, of each doctoral student, he/she showed a long the course?
# 1	Modest participation in discussion groups with just the minimum amount of messages requested. Heavy work load and lack of time to fully covered the demands of the course. Assignments and participations within the discussion groups were delivered and posted past deadline date. No commentaries were submitted when a survey or request was offered in the platform. The level of performance would be regular, having to improve his/her level of reading skills, time schedules as well as the understanding of requirements of the assignments. In terms of strength, the domain of some technological tools used in the educational platform is revealed.
# 2	Regular to modest participation in discussion groups with just the minimum amount of messages requested. Arguments without the right cite of bibliographic resources according to the APA style. Claims been attack by other peers in discussion groups, avoids confrontation and debating with others openly. Answers surveys but avoids submitting messages on requests offered in the platform. The level of performance is regular, with a need to read more literature as well as to structure and fundament arguments in order the discuss on online forums. Furthermore, there is a need to schedule time limits as well as to understand

	and apply ethics' in the research products offered. In terms of strength, there isn't any reviled, at the time.
# 3	Active to regular participation in discussion groups showing an interest in the course and his/her learning process. Hard time recognizing mistakes, strong remarks would be made toward other peers arguing misinterpretations of instructions and guidelines of the course. Demands in private emails, to the tutor, attention to previous perceptions of different situations regarding grades and replies received by peers. Answers surveys but avoids conflict openly in the platform. In terms of areas to improve the need of understanding methodological structures in the research process are required as well as the skills in written communication and collaborative work. In terms of strengths there is a high level of dedication, effort and self-learning capacities revealed along the course.
# 4	Active and constant participation in discussion groups, submits assignments in the early date time periods. Replies and arguments were submitted with a high level of criticism making accurate, but in some cases, cynical remarks to other peers. Demands in private emails, to the tutor, equality in grading others claiming past situations from other courses in the doctoral program. Answers surveys and confronts other peers openly in the platform. There is a need to learn to deal with problematic situations with others, without losing his/her temper. The level of performance is excellent; however he/she must learn to cope with peers and increase his/her level of collaborative team work. In terms of strengths there is a capacity of self-learning skills, dedication and time table with the learning process.
# 5	Regular participation in discussion groups with just the minimum amount of messages requested. The structures of the messages were correct, including the references of authors; all of the interventions were posted after four out of seven participants had already posted theirs in all the discussion groups. The doctoral student avoids confrontation and debates that might require attending the platform having to dedicate more time in the interactions. Answers surveys and submits commentaries without point out negative remarks towards other peers. With a regular performance, the doctoral student should increase the reading of literature as well as the structure and use of arguments with references of authors following this with a strict ethical performance, avoiding copy-paste of texts from internet and written material. In terms of strengths, there isn't any reviled, at the time.
# 6	Active and regular participation in discussion groups, submits assignments in the early date time period. However, the replies in forums are of low quality showing a lack of interest with the correct argumentation including authors to back the opinions expressed. The doctoral student replies with arguments when the qualities of the interventions are questioned. There are demands in private emails, to the tutor, requiring attention and guidance towards the quality of the interventions in a constant and repeatedly manner. Answers surveys and submits commentaries to other peers. Confronts and participates in debates with a regular performance. However, the doctoral student must increase the level of self-studying techniques, use of time and ethical standard within research protocol to increase the quality of interventions and products released for evaluation. In terms of strengths, there isn't any reviled, at the time.
# 7	Active and responsible participation in discussion groups, the qualities of the interventions are high in terms of expressing relevant concepts, ideas and arguments. Hard time recognizing mistakes and claims to be attack by other peers when questioned about the ideas or arguments expressed in discussion forums. Replies are direct with a high level of criticism and cynical remarks, as well as a high level of critical thinking and accurate points of view. Answers surveys and submit commentaries in requested forums in platform. With a good performance, the doctoral student should reevaluate the structure of the research process, as well as skills in written communication and time schedule to avoid rushing interactions and products for evaluation. In terms of strengths, there is a high level of self-learning skills and effort in the learning process.
Doctoral Student	What strategies would you implement in order to achieve connectedness between the doctoral students?
Applies to all doctoral students	Even though the responsibilities and ethical standards are revealed at the beginning of all the courses, it is relevant to applied sanctions when an ethical conducts is detected such as plagiarism, past due deliver of assignments as well as a not cordial and respectful communications in forums and chats. It is believe that applying the following actions, the standards expected to been followed by the doctoral students would give a structure to increase and develop a good to excellent level of connectedness and classroom community, increasing the learning levels of the doctoral students. However, when there is no code of ethical procedure the risks are high in terms of misconduct and unethical behaviour jeopardizing the image of all the doctoral students as well as the academic staff that runs and teaches in this doctoral educational program.

Note: Data obtained from the interview to a tutor from the educational program conduct via email.

2.3 Reflections of the results

According to the data obtained in the qualitative section, even though there is no significant difference between genders in terms of the community scale; there is a relevant and significant difference in relation to the level of connectedness translating this feeling in a perspective of the doctoral student's stating the lack of confidence and support by peers. In that sense, there is a relation with the profile of the doctoral students displayed in Table 1 and the tracking of their performance including the grade obtained by each in Table 2.

Taking as an example one of the seven discussion forums tutored by each doctoral student, the number of entrance to this particular forum is quite relevant, 5 to 1, taking into consideration both extremes. In this sense, the final grade obtained by the doctoral students is accurate in relation with the profile and development of their academic performance and on the other hand, by the number of entrees in total to the platform, per week and during the discussion group no. 3.

Besides this, in an internal perspective from the doctoral students, data from Graphics 1, 2 & 3, the level of

classroom community is a little bit higher for the female's participants without being quite relevant. In terms of the level of connectedness, again in the female's participants score a total of 17.5 pts vs. 15 pts from the male. Even though, these differences were not significant to over change the results in the instrument as a whole, only in the learning scale score males showed 27 pts. Vs. 26.2 pts. in the females participants. These results are not relevant, especially if we take into consideration the sample of seven participants.

Even though the learning objectives of the course were achieved, the level of classroom community according to the qualitative phase was poor having a significant level of dislikes and division between the group, with 2 members being cast out from the rest of the group, having a higher level of achievement in grades and performances as well as significant quality in their assignments. This data could be obtained between lines in the email and video-conferences between the doctoral students and the tutor of the course.

On the other hand, taking into consideration the views of the tutor interviewed, there is a relevant need to create and apply an ethical code of conduct within the program to avoid any misconduct and unethical behavior. When an event occurs, that might be considered out of the ordinary in terms of ethical conduct and practices, and there is no code to backup actions that the tutor might considered to apply, the development of the student will probably be jeopardize in terms of the rightness of their own educational process. Furthermore, the program itself could also be diminishing in terms of the Excellency that all the doctoral students should accomplish.

The level of requirements and exigency are not decreased by the tutors, even though some doctoral students might struggle during their learning process. However, the effects that this struggle could have in terms of stress, irritability and conflict with peers have to address and solve in order to increase the level of connectedness and classroom community in terms of a united group of scholars' within their own learning and development of becoming successful doctoral educational academics with a PhD degree.

Taking this into consideration, the skills and master of expertise should increase along their own formation in terms of written skills within the research of academic documents, papers and products with an ethical use of authors within their arguments in written and digital forms. In this sense, the ethical profile of all the doctoral students should always be kept in mind not only in each student but also with the academic staff involved in the educational program.

The level of commitment, self-discipline and motivation should increase as the doctoral students' progress with in the educational program. As a result of this, the level of quality of his/her performance should reflect this level of maturity as a PhD scholar.

3 Conclusions

The level of classroom community is a concept that should be taken into consideration by professors of postgraduate courses as well as administrative staff when they pretend to offer a high quality program. According to experts in the field, there are several reasons and elements that might have a direct influence in the levels of connectedness as well as in the learning process, having a low level of community connectedness and integration with the others provoke a high level of stress.

This only factor has multiple impacts and implications when there are external and internal factors that could be modified by the academic and administrative staff, by applying specific strategies and warm-up activities y dynamics with the doctoral students to improve the level of communication and integration as a group. Perhaps more collaborative activities with specific instructions and phases of achievements, as well as a high grade to be given in correlation with presented rubrics of values in form and concepts, might improve the collaborative work with others. Never the less, the doctoral students must keeping in mind the need of overcoming personal differences for their own good as well as the accreditation of an assignments and/or course.

However, when the level of maturity in the doctoral students is in question, the professor must try to guide and tutor the students' performances and attitudes, when spot them out, as a barrier to others to work as a team. In this sense, the tutor should keep a constant supervision to those whose skills are limited or poor, according to previous assignments delivered past due of a low quality, according to previous standards presented to the group. The level of support given by the tutor should be significant in terms of provoking a change in the students' performances and integration with the rest of their peers.

When applying instruments such as the Classroom Community Scale by Alfred P. Rovai (2002), version of 20 items, the academic and administrative staff have an opportunity to improve and exercise they leadership in order

to increase the level of community sense, not only for the benefit of the doctoral students registered in the program, but also for future students who might full field the requirements of the academic institution.

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Abstract

The submitted contribution focuses on the question of ICT competences as a necessary part of technical education teacher's professional qualities. The aim of this contribution is to outline the area of ICT competences and their importance for the work of a teacher in the so called information society. Through a survey we then present partial results of the research realized within writing of the dissertation theses named Teacher's Competences for Evaluation and the Use of Web Pages in Teaching.

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Peer-review under responsibility of the Sakarya University.

Keywords: ICT competences; undergraduate preparation; pedagogical research; Q-methodology; web pages

Introduction

The strength and power of technology is a typical feature of this era. Technology and information technology are an integral part of everyday lives of adults and children as a component of material culture influencing the whole development of science, art or sport. Technical education is specific mainly by its relationship between social and natural phenomena, when it uses natural laws to satisfy social needs. This caused that a contemporary person is existentially dependent on technology. The basic philosophy of technical education assumes that technology is one of the critical factors of current and future being. The progress and necessity of implementation of information technologies into education is reflected mainly on education content. Technical education attempts at systematic development of pupil's knowledge and skills, but above all, his positive attitudes to technology and its use, so that it positively influences the quality of life in contemporary culture. A teacher, who is the crucial factor in influencing the level of pupils' education, has here doubtless importance. His professional and personal qualities are therefore the object of attention of many researchers in the field of pedagogical reality.

Undergraduate Preparation of Technical Education Teachers at Palacký University in Olomouc

Undergraduate preparation of future technical education and information technology teachers is realized through the study program Specialization in Pedagogy in bachelor and master study programs, which are guaranteed by the Department of Technical Education and Information Technology. In bachelor study programs there are Fundamentals of Engineering Sciences and Information Technologies for Education and Information Technology Focused on Education. Students can then continue in master program Teacher Training in Technical Education and Information Technology for Secondary Schools and Second Stage of Elementary Schools.

Characteristic features of technically focused disciplines is the endeavor to create optimal assumptions for mastering the set of competences essential for graduate's employment in information-technical society. The program Information Training Focused on Education includes, apart from disciplines of information and mathematical nature, also fundamentals of electrical engineering and electronics so that the graduate is fully able not only to know but also mediate all necessary terminology of information activities, knowledge of software

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structure, programming, information technologies functions, knowledge of operating systems as well as technical knowledge.

Bachelor and master graduates should possess general knowledge and master basic skills and processes in their fields. They should also be ready to apply scientific and technical findings and creative skills in a creative way and by methods emphasizing active approach. They should stimulate the development of desirable ties and attitudes to techno sphere, technology and the use of technology and information technologies. The graduate is then employed especially in the field of education, according to the needs of institutions providing lower or higher secondary education (ISCED 2, ISCED 3, elementary schools, special schools, technical lyceums, secondary vocational schools and practical schools).

ICT Competences of Technical Education Teachers

The work with modern ICT requires, given its scale and varied character, analytical, critical and creative thinking (Uhlířová 2004, p. 206). Attention is directed mainly at the use of ICT. The time when it seemed that everyone will have to learn to program is long forgotten. The current situation requires „use and get“, „use and move further“ approaches. Information literacy is therefore more „user-based“ and more open to other areas of activities. Out of this reason there are new, higher demands placed on teachers regarding efficiency.

ICT integration into education depends on complex teacher's readiness. In connection with this, there arise many questions, e.g. how will teachers use ICT, how will they be able to make the best of them, how they will implement them into education process, which ways of learning will they stimulate at pupils, how will they develop the components of pupil's personality etc.

The document „Škola pro 21. století“ (2009, p. 7) states long-term key priorities of the use of ICT in education⁹⁵ and sets two conditions essential for reaching the aims of innovation process in education. One of them is modification of teaching practices and teacher's role. The teacher has to go through phases, from which, as we judge, teacher's competences with direct link to the use of ICT have to develop and become more precise. The phases of this process can be summarized as follows:

1. **Necessity** – this is mainly accepting the necessity to know ICT, which are generally possible to be used in education and teacher's profession.
2. **Mastery** – the choice of more effective strategies, better teaching models and freedom from ICT specialists enabled by increasing technical knowledge
3. **Empathy** – the move of attention towards pupils, technology is not the aim but the means, the range of usable technologies is broadening.
4. **Innovation** – the achievement of functional creativity, own adjustment of education aims, plans and practices.

The area of teacher's ICT competences is elaborated in outlined links. The competences are first understood as a set of yet unlabeled structures, thanks to which the teacher effectively uses modern ICT, aiming to reach better education results and simplification of his own work.

Teacher's ICT competences are dealt with on two levels; first explicitly defined or implicitly incorporated (resp. deducible) parts of teacher's professional competences classification (in the Czech Republic e.g. J. Vašutová or V. Švec). V. Rambousek (2007, p. 53) labels them as the necessary part of teacher's ICT competences for incorporating ICT into education, and on the level of field expertise, also for the realization of modern information education. Teacher's ICT competences therefore represent a whole, built from technological and functional point of view on information literacy, and including components, identified by different authors. We will introduce some definitions which enable us also more schematic comparison of their development in time. E.g. M. Černochová (2003, p. 16) defines components of teacher's competences as follows:

⁹⁵ These are mainly initiating changes leading to optimizing the use of technical means in teaching process.

- professional skills and discipline knowledge,
- pedagogic and manager skills and teaching knowledge necessary for ICT supported education,
- teacher's information and communication technological skills necessary for ICT application in education,
- language competences – knowledge of a foreign language, especially English,
- social communicative competences.

The above list contains items known from the systems of teacher's professional competences but entails also some specific ones. These are mainly the language competences, the binding of which is distinctively reflected in the frame of English language usage in ICT generally. Another important part are social communicative competences, under which it is crucial to understand the set of teacher's skills and abilities to motivate and activate a pupil while using ICT in education.

It is challenging to compare it with the model of DfEE study, which identifies three areas of teacher's ICT competences (taken and adapted from Uhlířová 2004, p. 207):

1. **Curricular area**, including:
 - Orientation in specific teaching ICT means and teaching environments, ability of their critical evaluation.
 - Knowledge of various utilization of ICT within and outside education.
 - Qualified choice and use of ICT products regarding fulfillment of education aims.
2. **Methodological area**, including:
 - Choice of stimulation and pupil's leadership methods.
 - Choice of method of work in case of pupils with specific needs.
3. **Organizational area**, including:
 - Adaptation on the use of different organizational forms of education.
 - Creating and use of education proposals supported by accessible ICT means.
 - Organization of such forms of work, which stimulate mutual cooperation among pupils and the need to develop their existing knowledge.

Individual areas outline the connection of teacher's preparation for tuition and its realization supported by ICT, with the main goal of enhancing the efficiency of education. This targeting interconnects ICT competences with teacher's professional competences and enables to view different links of pedagogy and ICT expressed in teacher's competences.

A broader connection of teacher's ICT competences with the areas of professional competences and own personality is included in the innovative model used by the Chilean Ministry of Education. The document *Competencias y Estándares TIC para la Profesión Docente* (2011), which aims at setting the basic frame of teacher's ICT competences, is based on five areas describing the relationship of a teacher to ICT (in their specification we mention the parts significant for this study):

1. **Ethical, social and legal area** – primarily focused on teacher's abilities to use ICT as a means of social inclusion together with new forms of socialization.
2. **Pedagogical area** – teacher's abilities to add value to teaching, incorporates ICT to enhance teaching efficiency.
3. **Professional area** – firstly entails self-development and secondly teacher's abilities to mediate more recent and effective perspective in ICT to the pupils and students.
4. **Organizational area** – uses ICT to improve curriculum's organization, school-pupil and school-family relationships.

This model reflects broader links and the trend of ICT in today's society. It spreads onto aspects of pupil's and teacher's personalities' development in environment which moves more and more towards social contacts and

communication realized via ICT. In the mentioned areas there are reflected pedagogical requirements to increase efficiency of education as well as cross-curricular requirements focused on every person's ability to become a full member of society, able to adjust to continuous changes.

In the current conception we understand teacher's ICT competences as a part of his professional competences, which is not strictly limited (i.e. including e.g. only technical knowledge and skills connected with the use of ICT in teaching), but linked and consequent with other areas of teacher's professional competences. The nature of teacher's ICT competences lies in the connection of ICT with teacher's educational activity, from this reason we perceive them as superior to teacher's competences for evaluation and use of web pages for teaching.

We present the following set relationship:

Teacher's competences for evaluation and use of web pages for teaching.	⊆	Teacher's ICT competences
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The research dealing with ICT competences of teachers at the second stage of elementary schools was realized within the writing of the dissertation thesis. We built on Schulman's theory (Janík 2005, p. 40) of pedagogical knowledge:

- **Knowledge of the content of teaching** – including not only the facts and terminology of given field, but also teacher's ability to understand the cause of the formation of the content, judging which topics are essential and which are less important (Janík 2005, p.40).
- **Didactic knowledge of content** – expressing the connection of teacher's didactic and content knowledge. Under these we understand knowledge of presentation and approach to different forms of subject matter and knowledge associated with the specifics of teaching different contents.

Knowledge of the content of teaching as well as didactic knowledge of content are in J. Vašutová's (2004) model a part of current teacher's competences. It can be assumed that it is not necessary to analyze these areas more deeply within the discussed competences and focus only on technological knowledge. However, according to modern pedagogical theories, developed abroad as well as here, technological knowledge cannot be understood separately, but always in interaction with the content of teaching and didactic aspects of their utilization. It follows from the work of professors of Michigan State University P. Mishra and M. J. Koehler (2006) that it is the separation of technological knowledge from the content and didactics which results in inefficient use of technologies, often only as a compulsory supplement in teaching or diversification which is only short term and without the desired effect.

Using Web Pages in Teaching

In introducing ICT into education processes was and is seen a risk of little explored and in many respects unclear activity (Průcha 2006, p. 310). Nevertheless it is practically unthinkable to imagine current school without broader use of ICT within or outside teaching. The centre of content of web pages use falls in the interaction teacher – subject matter – pupil to the area marked by the dash lined ellipse, see Fig. 1. It means that the features of web pages through which the education process is influenced and education aims are being met.

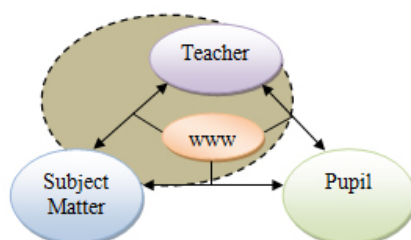


Fig. 1. Identification of Web Pages Features in Teaching

Many pedagogues dealt with the question of ICT in education, or the position of specific technologies in teaching. It is well known that this area is so progressive and fast developing that it can never be considered complete and closed in particular time. The authors therefore attempt at the greatest universality, abstraction and separation from specific technological solutions. We are interested above all in the role of the Internet in education and also the use of web pages regarding anticipations which they could fulfill thanks to their features.

The World Wide Web service or WWW (simply also Web) belongs among three most widely used Internet services. From the original environment for sharing and viewing text documents it became the centre of enormous amount of hypertext and hyper medial objects and a synonym for easy, fast and cheap information sharing. The current strategy (version) of the service WWW labeled as Web 3.0 is, unlike in the past, more focused on users interaction, sharing own information and most recently use of mobile technologies.

The didactic functions of web pages or the way of their use in teaching need to be connected with the meeting of pedagogical constructivism principles. We see the educational potential of web pages in the support of reflecting the requirements of constructing of knowledge, discovering information and their wider context, support of active learning and different forms of cooperation. Next, it is necessary to take into account the complementary principles of connectivism such as interconnection of information resources, widening and sharing of current knowledge database and the possibility to learn and communicate in creative environment.

Survey Methodology

Q-methodology was used to ascertain the views of respondents on the use of web pages in teaching. Questioned teachers from the field of technical and information education expressed their opinion on individual components of competences on the basis of the question:

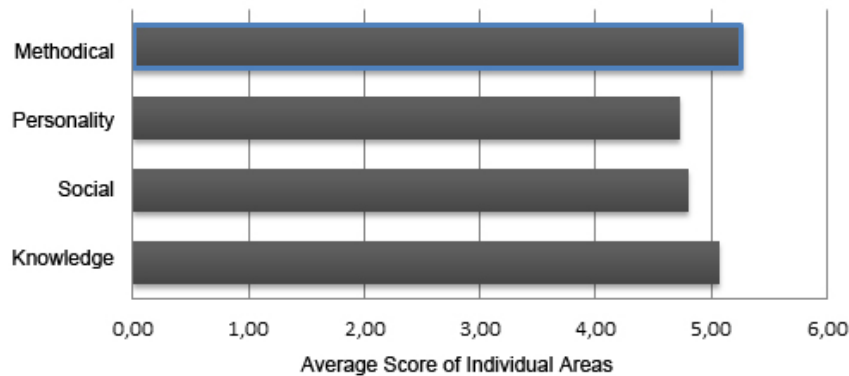
How important are the claims, stated on individual cards, for teacher's competences for evaluation and the use of web pages in teaching? The respondents then compared individual claims and allocated them degrees of importance from the most important to the least important. Individual claims (Q-types) were prepared based on the content of dimensions of teacher's web pages competences. The formulation of Q-types was approached with the aim to make them as close to respondents' language as possible, link them semantically and simplify them.

Q-types were semantically classified into four working areas. This intention lied in the need of wholeness, better transparency and possibility of level comparison of Q-types within the dimension of respective competence, from which the Q-types were derived. Characteristics of individual Q-types working areas:

1. **Knowledge area** (dimension) – focused on the content of professional knowledge,
2. **Social area** (dimension) – focused on the social area,
3. **Personality area** (dimension) – focused on teacher's personality, his teaching and flexibility,
4. **Methodical area** (dimension) – focused on professional knowledge application.

Analysis and Interpretation of Partial Results in Relation to Teacher's Competences Characteristics

In the initial phase of the final analysis of results in relation to specified competences of a teacher for web pages we divided the Q-types into charts according to individual areas and ranked them according to the order of average score and standard deviation. Graph 1 depicts the total average Q-type evaluation within the areas of individual dimensions.



Graph. 1. Average Score of Areas of Dimensions, in Which Q-types Were Formulated

Average score of individual areas as a whole is fundamentally balanced, nevertheless, there was certain dominance in emphasis on Q-types in the area of methodical dimension (i.e. application of professional knowledge). From the evaluation and characteristics of individual competences there can be formed an overall picture about the significance of these competences and about the layout of dimensions in the context of evaluation and the use of web pages in teaching. It is evident that considering the structure of a competence in the conception including personality and social aspects fulfils the set purpose, i.e. to capture the characteristics of a competence in terms of behavior, cognition and experiencing (Duismann 2005, p. 66). Mastering the professional knowledge within knowledge dimension and its application represented by methodical dimension are always adequately interacting with personality and social dimensions, which provide the competence with wholeness and interconnection with the structure of teacher's personality.

Conclusions

The conclusions that we reached underline the current constructivist orientation of education on pupil, his personality and needs. In the personality dimension defined competences there prevails the emphasis on teacher's ability to perceive the pupil as a partner, mediate him free and creative environment with the help of web pages – be always creative and inventive in this respect; be able to learn from pupils in this area since their experience often anticipates teacher's experience. Teacher's ability of reflection and self-reflection of own education appeared to be essential. From the point of view of the social dimension the emphasis is put on the ability to communicate and cooperate with pupils, to reflect their corresponding interests and needs, the ability to adjust one's own personal style to changes. Similarly e.g. in (Wiegerová 2012, p. 49). Teacher has to use web pages as an organic part of education, incorporate them into pedagogical situations to avoid interrupting the content of education itself.

The competences focused on evaluation and use of web pages for the development of pupils' independence and creativity proved to be of key importance in the whole system of defined competences, which proves the flexibility and variability of web as an environment, which, if used efficiently, enables participation in pupils' personality development and contribution to the quality and innovation of education. As it was assumed, the competences focused on technological aspects proved to be less significant. They are, however, in their conception not dissociated from pedagogical orientation of the whole system, still their characteristics reflects the current trend of departure from the need of technological knowledge and skills to greater orientation on broadening and innovation of didactic and pedagogical areas of teacher's professional competences.

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Coeducation and the insertion of women in the Academic Sphere: an experience, a trajectory in Brazil

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Abstract

In this work, we study the coeducation established by Minas Gerais State University (Brazil) from the 1940s to the present date. In that context was created the Domestic Sciences School, whose objective was to instruct women to be home economists with skills to influence and teach other women in the society. We aim to analyze the course of superior education of Domestic Science through a specific question: how have the home economists seen themselves in the context of changes in education and insertion of women at the job market and in the public sphere? We have crossed official sources with magazines, diaries, pictures and interviews with the students and professionals to comprehend how those women – students, then mothers, wives, professionals – spread values that kept them in a submissive social status, but from an academic sphere, a public space, which was before reserved to men exclusively. Our focus is a gathering of three elements: the education and its relationship with the women and the transformations of gender conceptions in Brazil throughout time; American home economics and its coming to Brazil; the human subjectivity and its nuances into the case of women who experimented a new living at the public sphere of science academy and through a specific kind of education.

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Peer-review under responsibility of the Sakarya University.

Keywords: Gender; Women; Coeducation; Domestic Sciences.

Introduction

The notion of gender used in Social Sciences in its modern connotation and among the studies about the femininity (and also the masculinity) is typically Anglo-Saxon. It was first used with larger application by Joan Scott. In this context the concept gained more visibility and operationally among American and European authors (Fisher & Marques, 2001). Scott (1995, p. 73) sees the concept of “gender” considering it the main element of the social power relations founded in the sexual differences. In her words:

The word denoted a rejection of the biological determinism implicit in the use of such terms as ‘sex’ or ‘sexual difference’. ‘Gender’ also stressed the relational aspect of normative definitions of femininity. Those who worried that women's studies scholarship focused too narrowly and separately on women used the term ‘gender’ to introduce a relational notion into our analytic vocabulary. According to this view, women and men were defined in terms of one another, and no understanding of either could be achieved by entirely separate study.

The use of the theoretical notion of gender has become an important way – maybe a necessary paradigm – to thinking and talking about the social relations, in general, and the particular social dynamics which, in this context, imply and affect the social power relations based on the social roles of gender, or, in other words, on the masculinity and femininity relationships.

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In this work our focus is the gender construction from a specific social universe: the Superior School of Domestic Sciences (SSDS) created in 1948 by the Minas Gerais government and established on the Minas Gerais Rural State University campus. The course was founded aiming to provide formation to women (who will become *home economists*) whose skills would allow them to work in the development of the social-economic reality of the peasant families of the state. Somehow, these objectives had been coming from U.S. It's because the Minas Gerais University, and also the SSDS itself, were created by the philosophy of the American land-grant colleges whose the main paradigm was the pragmatic knowledge to men and women, that is, the coeducation. For men: agricultural education; for women: domestic science

During the 1950s and 1960s many social and historical important changes could be observed in the western world. The so called "sexual revolution" experimented all over the western world from that period is based on the appearance of the contraception pill, the increase of customs from the hippie culture, as well as the inclusion of women in the public space, a social position that they had achieved since their introduction required in the labor market of the postwar (Hobsbawm, 2007).

In Brazil, however, despite the big cities, but also inside those, it seems that already in decades following the sexual revolution, traces of a patriarchal society still leading to the spread of the nuclear family culture. In that time it was still unusual to talk freely about sex among women. The women were considered a kind of home guardian, and their image as a perfect housewife had consolidated in Brazilian culture.

That image of the perfect housewife is historically linked with the dignity, nature and suitability of women. It seems that image is on a presupposed female submission. Then, women and home become a natural word connection. And also, exactly because of that relation, the social role of the women became the guardian of the moral and family values. This commitment of women to the family, the home and also to the husband was a commitment to the nation itself.

As the Brazilian historian Mary Del Priori says, "o bem-estar do marido era a medida da felicidade conjugal e essa adviria, em consequência, de um marido satisfeito". Or as it would go in English: the husband's well-being was the meter of conjugal happiness and it would come from the husband's happiness. Through a lighter way of talking, a female magazine in Brazil published an interesting article targeted at housewives of that time. Cited by Priori (2008, p. 292), the magazine exposed the words that following: 'Follow him in his opinions (...) the kinder you are in the art of thinking, the greater will your spirits be in his judgment of you. Be always beside him, taking care of him, encouraging him (...), recognizing his tastes and wishes'. Another magazine, quoted by Bassanezzi (1997, p. 631), says: 'Naturally man lives more for the career than for home. Then you need to always try to supply the gaps caused by the husband's absence with your mental balance and common sense. Don't hate him'.

Representations about women are historically noticeable. As Swain (2001) reminds us, Montaigne suggests that the most useful and honorable science and business to women is the 'science of cleaning'. At a similar tonic, Schopenhauer, also quoted by Swain (2001, p. 69) from Groult (1993, p. 93) would declare years after: 'there shouldn't be any women in the world except the small town women, who dedicate to home and young girls willing to become so. This way, we would turn them to work and submission rather than to arrogance'. The same author, exalting men, considers woman with a flaw which deprives her of humanity, stating that she remains like a *grown up child* her whole life, some sort of incomplete being between child and man, who is the real human.

Proudhon toughly warns that the woman who uses her intelligence becomes ugly, crazy; the woman who moves away from her sex, not only loses the graces that nature gave her but falls in the state of female, talkative, shameless, lazy, dirty, public poisoner, a pest to her family and to society. ^{vii} Nietzsche, approving this idea, argues that the intelligent man should consider the woman as a property, a being made to domesticity that can reach the perfection in a subordinate position.

Discussion

Today, when we look around ourselves, we can see that the things have changed. Women changed, as well as the family, the education, the social relations and men itself. In this work, we aim to comprehend how these traditional conceptions changed from the real historical dynamic of the social and gender relations of power and domination. Then we study the foundation and the process of development of Superior School of Domestic Science in the campus of Viçosa Rural University, Brazil. The course was created to train women to be home economists and, from that, to be a teacher to teach and develop the farmer families.

In order to comprehend something about the project of the SSDS, take look at the words from priest Mendes, professor and one of the founders of the new institute of domestic science. He gave his discourse on the occasion of the official recognition of the SSDS. The lecture happened in 1952 and the historical document could be accessed in Priest Mendes Historical Archive which is managed by Home Economics Department, Viçosa University, Minas Gerais State, Brazil. Eloquently, the priest said these words:

The ESAV might offer, in the prime of its strength, the backbone of the new institution around which, (...) seek to accomplish that great work effort that, by its example, is only made by staff, through sacrifice, with rigid discipline, with devotement sometimes worthy of epic, nursed with tangible realities (...) idealism. Behold the School of Domestic Science (...). It's a novelty. As such it suffers dual reaction: from those who accept the idea and from those who disbelieve in it, and always shooting the spice of their negativity at it. On my part, I am enthusiastic, I believe in their practice vitality, I don't forget what has already taken place and I don't ignore how much we still have to do for it. I also think it might even be recognized by the federal government in the near future. We have the School of Domestic Science with full legal existence under the 8,600,000 inhabitants and geographical area of the State of Minas Gerais.

Note that the SSDS, even recognizing its limits – especially the presence of the opponents who were disbelieving the project as the discourse suggests – had the intention to legitimize itself for the huge geographic area that it had reached and for the work done with the population by the professionals from the course, as we can see in the father's words.

We also accept that there were more than just material issues when the course was created. We can see those issues in Mendes's discourse. The professor seems to refer to the moral image which had involved ESAV's foundation itself. Then, the tonic of Mendes's discourse was also about the modernizing mission of women. This way, as Brazilian and American professors and professionals have done to the foundation of the University in the beginning of the 20th century, Mendes and others, from here and from there, conceived the course as a great way to women practice their natural mission: take the scientific knowledge about home economics to families through the housewives.

Priest Mendes, in order to neutralize the bad eyes from unbelievers and opponents, shows them that the woman's role in public and in private environments could be considered as science. Back to his words:

There are those who do not believe that superior level in domestic issues could exist. I can reply them reminding them that, by the same way, there were those who did not believe in agronomy as a kind of science based career. So, where are they? Well, the unbelievers from 20 and 30 years ago are proud of their sons and grandsons today because they are graduated from our schools and they offer an excellent service to the nation now.

Offer an excellent service to the nation now. A typical speech should integrate women and their task to the nation from that time on. It was exact reasoning that people had used to talk about men's role in the nation. In the words of Mendes:

Five decades ago, in this region, graduated pharmacists were exception in the profession. So were odontologists. Then I ask you: could the sale of drugs demand more scientific information than the governing, the adorning and administration of the home, the caring of children, their nutrition and their education? (...)

I think that the obligations of the second case [he refers to domestic duties] implicate other circumstances, more serious responsibilities; a deeper preparation than pharmacists [he refers to handling of drugs by the pharmacists abovementioned]. From simple notions of aesthetic, cooking, clothing, even knowledge of hygiene, childcare, physiology, anatomy, psychology and the natural sciences, essential to any course.

With these words, Mendes seems essaying what he intended with the course of domestic science: give an academic and scientific treatment to that activities which, by presumption, were designed to women. We can see Professor Mendes used the cultural presumptions which were spreading on that context to define the conceptions about women social roles. We can also realize that the father's words were in perfect consonance with the words

that we have read in the female magazines (1950's and 1960's) quoted above.

The inclusion of those women (the students from SSDS) in the work market interests us in particular because they will enter into a social network that is both new and different, in that, although with reservations, it admits their arrival to the public through scientific and even for a job that entailed a universe that was historically designed to and occupied by men.

Combining knowledge from natural science, medical sciences, and social science, the SSDS proposed a specific role to the women who graduated there. That role should involve the development of family and, therefore, of man, of kids, of community and of work itself. These elements were linked to rural environment at first. Let's see Mendes's words once again.

These young women [he refers to the women who were graduated from the SSDS] will be working at the most important and imperiousness demands of our age, which is the improvement of rural life. An agronomy engineer has to take a superior course to work with agriculture. The same way, a woman takes a superior course to work with home issues, man and family. House is more important than land. Not everyone has a piece of land. House, it is good if everyone has one. But if house is not more important than field, are not man and family worthier than glebe? Thus, the effective necessities of knowhow to the SSDS are: educate man, guides family and humanize communities.

Such as we observed, at the time of Mendes's discourse, many cultural stigmas about woman within social relations were also created. They were spread by the female media, the intellectual speeches and sometimes even by women themselves. This type of cultural and social process – the spreading of representations of female submission by women among themselves – can be observed around 1950's and 1960's.

According to Mendes, the women who intended to graduate in the SSDS had to have a new skill. It could be grouped in formation, guiding and humanization of family. Even though it seems so close to a traditional woman conception – reconsidering old myths such as “the queen of home” – the father's discourse about that woman student (maybe scientist) enables her to conquer the public space – at first in the academic field, then in the marketplace. What exactly does it mean?

The answer for this question could be hidden behind some historical fragments recorded in unbound papers, letters, academic official documents, academic newspapers etc. We do not want to analyze just the context of the creation of the SSDS. Our goal is to study it throughout its historical dynamics, that is, comprehend it throughout time, from its own transformations, the difficulties and the moral which was created and sometimes revered and rejected at others. These elements can be found only from a specific research which takes into consideration both official and unofficial documents. Throughout the lines of writing from students and also from professors, supervisors and deans themselves, we can achieve short fragments of that intricate and fantastic history.

Behind the actions of young students – both freshmen and senior – in their private confessions, reports and other writings we believe we are able to find interesting and valuable things which enable us to understand a huge part of that academic trajectory. We have been following Foucault's teachings about the archeology of knowledge, by which the author proposes a reflection about a new conception of History and its sources. According to Foucault (1972, p. 7).

(...) history has altered its position in relation to the document: it has taken as its primary task, not the interpretation of the document, nor the attempt to decide whether it is telling the truth or what is its expressive value, but to work on it from within and to develop it: history now organizes the document, divides it up, distributes it, orders it, arranges it in levels, establishes series, distinguishes between what is relevant and what is not, discovers elements, defines unities, describes relations. The document, then, is no longer for history an inert material through which it tries to reconstitute what men have done or said, the events of which only the trace remains; history is now trying to define within the documentary material itself unities, totalities, series, relations.

The interpretation of the document is necessary. Recognizing it in its invisible nuances seems to be the great challenge of Contemporary History. We need to give voice to the things which do not appear at first glance. Selecting and crossing the sources is the greatest methodological performance of historians nowadays. This way, comparing official registrations with newspaper and magazines, diaries, letters and photos from that time, we

believe we can comprehend many symbolic and concrete processes about gender and power relations.

The women from SSDS have built meanings to their academic experience. They identified one another and felt themselves belonging to that place – the university. They created and were created from images and cultural representations that built their personal culture and their group culture which they used to compose their academic trajectory. The institution on its own, from its directors, supervisors and professors (mostly composed by men) created an ideal of women, an ideal of female science and an ideal of society itself. And everything that was created in this field –i.e., the symbolic and cultural sphere – was done in a historical context of theoretical inflexions and changes of social conceptions about men and women as well as about the social role of sex (or gender) itself. To comprehend it all it is necessary to create some methodological comparative strategies between practices and representations because this work is not just about a *women trajectory* but also about an *ideal of women* which had been established behind those wide official projects of coeducation.

To comprehend the coming of home economics to Brazil it is necessary to think about it as a special kind of tradition built onto a modernity discourse. In the U.S the conceptions about home economics assumed a type of woman, of family, of science and even of national responsibility. The Catharine Beecher's theses were hegemonic at that context. According to her, 'Academic education was necessary prerequisite to successful homemaking'.

As we noticed above, the commitments with the nation was one of the most important issues in which the social role of women was involved. Catherine Beecher emphasized it:

There are some reasons, why American women should feel an interest in, the support of the democratic institutions of their Country, which it is important that they should consider. The great maxim, which is the basis of all our civil and political institutions, is, that "all men are created equal" and that they are equally entitled to "life, liberty, and the pursuit of happiness". But it can readily be seen, that this is only another mode of expressing the fundamental principle which the Great Ruler of the Universe has established, as the law of His eternal government (...) in a truly democratic state, each individual is allowed to choose for himself, who shall take the position of his superior. (p. 26)

Beecher (1842, p. 155), as Mendes in his speech, spread presumptions about natural women roles in her book. According to her:

A woman, therefore, needs to cultivate the *habitual* feeling, that all the events of her nursery and kitchen, are brought about by the permission of our Heavenly Father, and that fretfulness or complaint, in regard to these, is, in fact, complaining and disputing at the appointments of God, and is really as sinful, as unsubmitive (sic) murmurs amid the sorer chastisements of His hand.

Around the last quarter of the 19th century and the first decades of the 20th century, the diffusion of systematic knowledge about domestic science in the U.S was made by many ways among which we can highlight the famous science fairs. Expositions, like Philadelphia's, were important occasions to show the news and innovations from science (and domestic science) to visitors from all over the world. Ellen Richards, one of the most known names of U.S Home Economics at that time, cited by Mathews (1987), once stated that in the fairs the 'America was awakened in the culinary art, and in home furnishing and decoration among other things'.

At that period, big efforts were made by American home economists in order to systematize the new knowledge about the domestic matters. The scientism from the 19th century had been consolidated in the beginning of the following century and everything could be considered an object to the scientific investigation. The positivism from August Comte and his followers was still a methodological reference to scientists of many areas. Exactly because of this, the scientists believed in the science intervention power. In Home Economics, for example, the most important goal was to change the organization of the domestic environment from the furniture until the cooking. In this particular, Pierre Blot – a French chef, teacher and researcher from New York Cooking Academy – published in 1868 a little manual of cooking whose title and target were emblematic: "Practical Cookery for ladies and professional cooks – the whole science and art of preparing human food". Still on the cover of the book it could be read: "if ye be willing and obedient, ye shall eat the good of the land".

Home Economics faced a great challenge in avoiding the amateurs. According to Mathews (1987, p. 134)

Clearly, the home economics faced a challenge because professions were upgrading themselves by excluding amateurs, by defining themselves as 'manly' in a variety of ways, and by emphasizing the abstract over the concrete. In their discipline were to be a profession at all, they would do best to emulate existing male professions. The most important step was to distance themselves from that lowly amateur, the housewife.

As we can see, one of objectives of home economists was to consolidate a new way of thinking about domestic issues among the middle-class women. In Brazil something similar had to be done as well. Before the creation of the SSDS (1948), Viçosa University (that time called Superior School of Agriculture and Veterinary), probably in order to prepare the regional culture to receive and to understand the home economics, launched an annual event that became broadly known: the "Feminine Month". It began in 1935. During that period women from many schools and institutions like orphanages among others, and even housewives had met one another in order to take courses and lessons on home issues.

Sources and methodology

Our two main documental archives are composed of i) Priest Mendes Historical Archive (*Arquivo Histórico Prof. Padre Mendes*), organized by graduating students in History from Viçosa University (*Universidade Federal de Viçosa*) and ii) Viçosa University Historical Archive (*Arquivo Histórico da Universidade Federal de Viçosa*). Both archives are available almost totally organized and they can be accessed by all researchers in Federal University of Viçosa. Moreover, we have been making interviews with ex-students from SSDS including some current professors from Home Economics Department, one of many school departments which compose the campus of Viçosa University.

Studying the answers from those women it seems particularly important to us mostly because they show us the dimension of social changes that had been happening during the time of the creation and development of the home economics superior course from Viçosa University. How do those women perceive themselves? How do they comprehend their trajectory, as well as the objectives and purposes of the course? These questions are very important in order to guide us toward understanding something else about the concrete life of those historical characters whose trajectory can reveal to us their view about themselves.

The oral history can totally help us in such project because the narratives from our interviewees could serve as evidences of what they experimented inside historical process of ruptures and continuities on social roles of women. We composed our documental *corpus* with newspapers and magazines targeted to female public through which authors and advice columnists published many cultural representations on women and femininity during the historical context that we considered in our work. We believe that the creation of SSDS implicated building an *ideal of woman*, or even better, an *ideal woman*. Obviously we need to consider the process of the creation of the superior school as an official project from State and a special type of social phenomenon where the gender and power relationship becomes the great question. Then, on the one hand, we have institutional presumptions and, on the other, we have social, political, juridical, economic and cultural conceptions and discourses (as Mendes's) about woman through a gender perspective.

In analytic point of view this is an important thing because, according to what we believe, discourses are able to create stigmas and naturalize them. The power of images and social representations from discourses is in its ability to make cultural conceptions sound natural. Then if we look through this perspective we can consider that the rhetoric would consolidate some symbols and cultural categories by which many kinds of domination become mere natural forms of social organization. According to Foucault (1988, p. 180) "we are judged, doomed, classified, bounded to perform some duties and destined to a specific way of living or of dying according to the true discourses which have many and different effects of power". Following this thinking from Foucault we can also emphasize that, in conclusion, discourses enable the creation of concrete social power structures by which people are able to control some conceptions about men and women, work and social roles of gender and humankind itself. From those discourses people can be judged by this or that way according to the wishes of some groups.

We have been talking about women since the beginning of this text, but it does not mean men are out of this history. Actually, they must be considered as well as we are doing about woman. Otherwise our analyses will not

be complete enough to intend good conclusions. Besides we aim to comprehend the social construction of women exactly through their relationship with men. Moreover the discourses from which we are analyzing the creation and development of the course of home economics in Viçosa University are linked to male's judgments and many among them were written by men. Through this perspective we guide ourselves with the theoretical notion of gender proposed by Joan Scott as we observed above. It evokes two analytical operations: *i)* define separately gender and sex, because the first refers to social constructions about male and female notions while the second is taken as a mere reference to biological difference; therefore, *ii)* comprehend the category of gender as one of the consequences of social conflicts and power relationships both material and symbolic.

The subordination of women and male domination could be analyzed as elements created from social relations that are established on the differences between masculinity and femininity. That process could be taken as the first step to the manifestation of power relations from four interdependent dimensions: symbolic, organizational, normative and subjective. The symbolic dimension includes multiple and conflicting representations such as Mary – Jesus's mother – regarded as a symbol of purity and goodness; or Eva as a symbol of sin and evil. The normative dimension could be defined from interpretations of the use and meaning of symbols which are considered of being able to create metaphors which are so strong that they can guide and determine social behaviors between different sexes – male and female. We can find it in religious dogmatism but not only there. It could also be seen in educative, scientific and political purposes. They polarize the male and female relationships. The organizational dimension concerns social organizations and institutions which can be used as mechanisms to make deeper the asymmetries between gender male and female. In the end, the subjective dimension involves how gender identities are constructed and established socially and historically as cultural representations.

When we use the theoretical notion of gender to think about social relations, automatically we must consider it as a category of analyses which make the study in social history stronger. It is able to show us for example that love and sex relationships are not natural. Actually, they are directly linked to the cultural universe and generally they determine the construction of gender social roles. The students from SSDS, for example, reached public sphere through those gender representations and they almost always had to face prejudices and stigmas of cultural representations, even though it had been naturalized by a rhetoric strategy.

Scott better explains to us once more. According to her, gender relationships have specific dynamic, but they also link themselves to other kinds of social domination and inequality (race, ethnicity, class) (Scott, 1995). Moreover, the social relations of gender as well as the social relations of power are all ticked by hierarchy, obedience and inequality itself, inside which there are conflicts, tensions, negotiations and alliances. As Fischer & Marques (2001, p. 40) observed "The socially legitimated gender condition is composed by constructions, images, references people have to place themselves, in a particular way, in their concrete relations with the world. Men and women perform combinations and arrangements according their concrete necessities".

Finally, what questions should we ask to the documents which we described above? Exactly the following: what concrete relations and demands were constructed from the creation of SSDS and how were they projected throughout time? How has the SSDS contributed to construct a kind of femininity in academic space?

Partial conclusions

For a long time the domestic space was reserved to woman and she was always considered inferior to man. Home, the *locus* of the domesticity was seen as a female space naturally. From this it was resolved that for man was reserved the public space, the political participation and the high decisions; for woman the domestic environment where it did not exist room for rationality and science, only female feelings like love, compassion and care.

The male representations spread by an androcentric culture – to use the expression from Bourdieu – throughout time are present among the gender relationships. Then the students of the SSDS would need to use those representations which could suggest their social (or sexual) exclusion. Nonetheless, it would be exactly from that same semantics that those women would go on to affirm themselves at that new context. Thus, if an important part of the domination discourses about women from men established on the degradation (and on the contempt) of the domesticity throughout history, then when the SSDS stimulated the valorization of domesticity issues with the valorization of scientific rationalism, as well as the chemistry knowledge, biology, management,

nutrition and economics, it ended up valuing women and their skills. Even though from elements typically and historically belonging to the male universe, women were coming to the public space, reason by which the domestic environment it was becoming a very special field to science intervention.

We believe the creation of the SSDS was a very important social and historical event. There is a lot to talk about social and gender roles conceptions as well as their cultural delimitations. With the institutional construction of SSDS were also created genealogic limits which guided actions and behaviors that were consolidated in concrete social relations. Further, as we believe it, from knowledge on the sources that we have got so far, the trajectory of the SSDS created one history of men and women, professors and students, supervisors, directors, deans and school departments from which were spread and consolidated many conceptions about social organization. We agree with Mary Del Priori (1997, p. 7) who states:

History of women is not just about themselves, it is also about family, child, work, media and reading. It is the history of their body, their sexuality, of violence that they suffered and which they practiced. It is the history of their crazies, their loves and their feelings themselves.

We would add to this observation from Del Priori that the history of women is many times involved in official projects from State for the fields of education, culture, identity, extension and production of knowledge (many times resulting of male ideology); moreover, it appears involved in actions of groups whose objective is always to create some images which could be used for consolidating a type of concrete woman appealing to her commitments with the nation. As we have seen before, those images were able to build stigmas about woman that would be used by media or by intellectuals' speeches to legitimate and naturalize some abstract ideas such as the "queen of home" among others.

In the end, what does it all mean? What do those considerations about woman and her place in history of science have to do with the male domination – to remember the Bourdieu's expression? Whom did those discourses serve? How was the historical reality of those women from SSDS? What pathways did it assume? What was changed and what was kept in that amazing and enigmatic trajectory? These are some questions which should guide us in this work.

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Collaborative creativity with eCiC

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Abstract

Students are often attentive highly motivated individuals who have good ideas which can provide successful solutions for all parties concerned, but mostly they have no way of bringing in and developing new ideas with other students in order to improve learning and educational processes. To enable collaborative creativity, the eCollaboration-Research Team at the Swiss Distance University of Applied Sciences has developed a solution whereby students or teachers can collaborate and nurture new creative ideas in a structured and guided way. In our solution, this nurturing takes place by means of a collaborative online process in which the "idea seed" will be "cultivated" during various interactive phases as defined by the eCiC method and supported by the eCiC online tool (eCiC = electronic Collaborative idea Cultivation). Together the method and tool constitute the eCiC system. The eCiC interaction method is a procedure which defines a creative collaboration session in three stages: 1) the setting up of a creative collaboration session, 2) ideas processing according to the "Stockalper model" as well as applying the Solution Finder Model (SFM) and 3) closing the creative collaboration session. Stage 2 contains the use of two relevant models, the "Stockalper Model" which guides the user through three different questions, symbolised by the moon (illuminate your way in the darkness), stars (search for new ideas) and sun (deploy your solution) as well as the Solution Finder Model, a problem-solving method which is based on the principle that in order to find a high quality solution, the 3 elements of need, objective and solution should always be identified and explicitly connected to build a coherent triad (the unity). This paper describes the eCiC approach, the method and models, the online tool as well as some applications in educational situations. As the eCiC system has already been used in distributed research teams, worldwide business companies and distant driven educational courses, a summary of experiences, possible applications and future developments will be made.

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Peer-review under responsibility of the Sakarya University.

Keywords: Creative collaboration; CSCL; Community of Practice; Continuous Improvement of Learning (CIL)

Introduction

Creative collaboration among students is an activity that plays an increasingly important role in education. Various relevant educational activities, like project-based learning, round-table discussions, game-based learning, collaborative learning and open learning, require ways of learning together in order to produce shared results which can greatly benefit from creative contributions. But collaboration and cooperation are not easy (Sennett 2012) and schools are not particularly renowned as creative places (Robinson 2012): so it is not surprising that problems with creative collaboration are rather common among students (Fominikh 2014) and can lead to frustration and hinder the learning process in many ways (Liu 2010). Often it is the technology used for the collaboration which is blamed for the problems of student collaboration, but this blame may be misleading (Sorensen, 2005).

We usually think about creative work in terms of the exceptional performances of a single individual, but creativity can be greatly enhanced by leveraging diversity, tension and sharing if people play well together (Klocek 2011). The question is then how to "play well" in a collaborative educational setting that requires

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creativity? Charles Leadbeater, author and former advisor to Tony Blair (Pfauth 2008), proposed five conditions for stimulating creativity through collaborative action:

DIVERSITY: Diversity is king. Participants need to think differently and have different knowledge.

SHARING: Give people ways to contribute. They need really simple ways to add their piece of information.

CONNECTION: Connect people with each other by using the most suitable technology.

PURPOSE & PAY-OFF: The most important one: participants must have a shared sense of purpose and an individual sense of pay-off. Use a mascot or something.

STRUCTURE: Communities need to have some element of structure to make decisions.

Our eCiC system, an online system for collaborative idea cultivation, fulfils these conditions and has the potential to support students in "playing well" together and to stimulate creativity among them. In the first part of this paper, we present the approach and the two systems' components, a method of interaction and an online collaboration tool. In the second part, we will then suggest some opportunities for promoting creative collaboration in education by applying the eCiC system.

The eCiC Approach

Collaborative learning is, in essence, the co-construction of shared understanding (Roschelle and Teasley 1995; Dillenbourg & Fischer 2007). More specifically, Schwartz (1995) suggested that the effort of an individual student to understand other colleagues constitutes the real driving force of collaborative learning. The importance of this effort is reflected in the conception of the eCiC approach and in the design of the eCiC system. In a class or group, when a student is trying to understand other colleagues and also when he/she is trying to contribute to the class's or group's work, the student will have and propose ideas. And what happens in the class or group interaction with these ideas? They will enter the conversation or debate and slowly disappear in a sea of words, leaving a quickly disappearing wake pattern. This may be ok in most cases but is surely a problem when the lost idea had the potential of making an important contribution. The need in such situations consists of taking the idea seriously, keeping it alive and recognising its value. This is where our approach comes in: our objective is to make sure that the idea does not get lost and to offer it a chance of being taken seriously, kept alive and recognised for its value. The foundation of this is our conception of any idea as a seed: if we give them some special attention and nurturing, they will grow and reveal their true potential. In our solution, this special attention and nurturing is carried out by means of a collaborative online process in which the "idea seed" will be "cultivated" in various interactive phases defined by the eCiC method and supported by the eCiC online tool. Together, the method and tool constitute the eCiC system.

The eCiC Interaction Method

How can a student who has an idea propose it to the group or whole class for discussion and how can we make sure that this idea will not be ignored, will not disappear and that the student's potential contribution will not be lost forever? Our solution to meet these objectives consists of a facilitated interaction process which will proceed online with the common purpose or goal of cultivating the proposed idea. Our design of the whole interaction process and platform has been guided by the objective of promoting a sense of community. The main reason for choosing this design principle is that we see in the community of practice model developed by Wenger (1998, Wenger et al. 2002, Bettoni et al. 2007) the best way to fulfil the aforementioned conditions for stimulating creativity through collaborative action: diversity, sharing, connection, purpose & pay-off, structure (see section 1 - Introduction). The eCiC interaction method is a procedure that defines three stages of a creative collaboration session: a) stage 1: setting up of a creative collaboration session; b) stage 2: idea processing according to the "Stockalper model"; c) stage 3: closing the creative collaboration session.

.1. Creative collaboration session: set up

When a student has an idea and wants to propose it to the group or whole class for discussion, he/she logs in in the eCiC platform. The student's role is here that of an "idea owner"; as such, the student can post a short description of the idea in the "Idea entry" forum. A team of students with the role of facilitators (Facilitator Team or F-team) will see the new entry, briefly discuss it and appoint a member of their team to the role of "idea facilitator"; from now on, this student will be responsible for the further processing of the idea. At first, the idea facilitator will check that the new idea is suitable for eCiC according to some criteria (for instance: form, content, time, duration, etc.); if this is the case, he/she will then start a new discussion (in the "Team Building" forum) for setting up a team of students interested in collaborating to further develop this idea (Idea Team or I-team). Required members of the I-team are: the idea owner, the I-team facilitator, one or more ideas supporters and possibly either a "devil supporter", a devil's advocate for engaging others in an argumentative discussion process or an "angel supporter", dedicated to promoting a more conversational, dialogical way of interacting (Gurteen 2014, Zeldin 1998); all of them are recruited from students of the same class. Next the facilitator will announce in a dedicated "Idea News" forum the opportunity to participate as supporters in developing the idea and will give the link to the idea posting as well as that to the team building discussion. All students will see this announcement and, in case they want to become a member of the I-team in the role of an "idea supporter", they will register by posting a short motivation statement in the team building discussion. Once the team building has been completed, the facilitator will clarify some planning issues (like dates for synchronous meetings or session milestones) first with the idea owner and then with the whole I-team. Eventually, all is ready for starting the idea processing.

.2. The "Stockalper model" of idea processing

Within a creative collaboration session, idea processing follows the so-called "Stockalper model"⁹⁸ in which three processing phases - a moon phase, a stars phase and a sun phase - are combined to form a unitary sequence. At the beginning of idea processing, the facilitator will open a new discussion in the "idea processing" forum and for each phase, a new discussion thread will be opened at the beginning of the phase. At the end of each phase, the facilitator will write a summary of the results in the idea processing wiki, where each idea will have its own wiki page. Before starting with phase 1, the facilitator will also create a new record in the idea database, a collection of all relevant idea processing features, like idea identification number, idea title, idea short description, name of the idea owner, processing status, date of idea entry, link to forum discussion, link to wiki page and link to results.

Phase 1: The Moon phase. During this first phase, we clarify the proposed idea and search together for its objective (idea definition). The moon symbolises the fact that we start our search in the dark and are looking for something that provides us with a grip so that we can advance more easily in the intended direction. This phase of idea identification provides answers to the question of "WHAT do we want to achieve?" It contributes to understanding the problem (need) and to defining which objective to pursue.

Phase 2: The Stars phase. In this phase, we search for solution ideas (idea search). The stars symbolise nearby and far away solution ideas which appear in many different forms and together constitute our solutions space. The phase of ideas finding provides answers to the question of "HOW can we reach the WHAT of phase 1?" Many solution ideas are collected, analysed and systematically evaluated in terms of their suitability in satisfying the identified needs and reaching the defined objective. This is a crucial moment of the conversation and in order to make sure that collaboration proceeds efficiently and effectively, we apply our SFM method here (see next section 3.4), a problem-solving method for finding high quality solutions quickly (Bettoni et al. 2013). The task of applying the SFM method is usually assigned to the facilitator but in principle any member of the I-team could do it, provided he/she has received some training and gained some experience.

⁹⁸ Kaspar Jodok von Stockalper (1609-1691 in Brig, Valais) was a merchant, banker, officer, politician and entrepreneur in Valais. Pope Urban VIII awarded him the Order of the Golden Spur. Between 1658 and 1678 he built in Brig a castle known as the "Stockalper Palace", today recognized as a Swiss heritage site of national significance. Sun, star and moon are placed as pinnacles on three rooftops of the castle, thus symbolizing a connection with the universe and more generally "universality".

Phase 3: The Sun phase. In this last phase, we work on one idea selected from phase 2 and try to determine how to implement it (idea implementation). The sun symbolises the elected star with its unique features. This phase of idea implementation provides answers to the question of "BY WHAT means can we implement the HOW from phase 2?" Practicable solution ideas are analysed in terms of their suitability for implementation and improved accordingly. At the end, a short report and a fact sheet are produced which describe the idea as it finally resulted from the three processing steps.

.3. Creative collaboration session: closing

When the two documents for the idea report and idea fact sheet are ready, the facilitator will update the database record and then create a fourth thread in the idea processing discussion where he/she asks the team what they suggest doing next with the results of the work. This discussion will produce a simple to do list of tasks with deadlines and the persons in charge. When a task has been accomplished, the person in charge will post a short notice in the same thread. When all the tasks have been accomplished, the facilitator will invite each team member to participate in a short evaluation survey about the whole session; after that, the session will be closed by each team member saying thank you and goodbye in a creative way. An important fact in collaborative creativity is the separation of divergent and convergent thinking phases. The worst thing for a new "idea seed" is to criticise this idea by immediately analysing it and taking the idea down by evaluating a not yet cultivated idea. Phase 1 and the first part of phase 2 are divergent thinking phases whereby an evaluation of a new idea is not foreseen, especially one that could easily kill an early idea. And at the end of phase 2, there is an evaluation process driven by the solution finder model which allows a search for sustainable solutions and opportunities rather than for prevention of an idea. The user will be guided through the online tool as well as by the idea facilitator. This makes it possible for the user to start and proceed without any lessons at the beginning. It is like using an app on a tablet where the motto is: just start, use and experience it.

.4. The SFM Method

In the Stars phase of idea processing (section 3.2), the crucial question is how one can evaluate the solution ideas proposed by the I-team members. We have here a situation in which a wide variety of statements from the forum postings have to be put in some kind of order. A suitable generic paradigm for this was found in the SFM structural model by considering that a great many of the contributions could be viably interpreted as direct or indirect assertions either about needs or about objectives or solutions. The SFM method (Solution Finder Model) is a structured, formal procedure to be applied during interactions in small, medium or large groups where there is a need to collaboratively develop shared solutions of a high quality standard ("clean") and in a short period of time ("quick").

The essential core characteristic of the SFM, which has its theoretical foundations in cybernetics, systems engineering and radical constructivism, is the idea of the unity of 3 relevant elements: needs, objectives and solutions. The term unity refers here to the guiding principle of SFM: in order to find a high quality solution, the 3 elements should always be explicitly connected to build a coherent triad (the unity). The SFM is used as an analytical tool, where the starting point appears in the form of a problem for which you want to find a solution. The following example from daily life shows how the method works: a) Problem (starting point): "I'm hungry"; b) You may think, that "eat" is the solution to the given problem. But this is only the case if "I'm hungry" is the need and "be satisfied" is the objective; c) But if the objective is "to reduce weight", then the solution will be "do not eat" and the need occurs still as "I'm hungry"; d) It is also possible that "I'm hungry" is the objective, then the need can be "loss of appetite" and a solution could be "serious sport". It is also possible that "I'm hungry" is a solution, then "treatment of anorexia" could be the need and "eat" would be the objective. As shown in the example, "I'm hungry" can be a need, objective or solution. By applying the Solution Finder Method, a group will become aware of these different possibilities and avoid the confusion that emerges when group members use the same term but are not aware that they are interpreting it differently, either as a need, objective or solution.

The eCiC Online Tool

Basically the eCiC Online Tool has to provide support for enabling the interactions and tasks required by the eCiC interaction method described in the previous section. Our current implementation is based on the Moodle system, which is widely used in education around the world. Moodle provides all the tools that we need for implementing the eCiC interaction method: a forum, wiki, database and document. Our guiding principle in designing the user-interface of these tools was to lower the cost of participation as much as possible, which is also one of the requirements that have proven relevant for supporting community life (Agostini et al. 2005). Our solution for reaching this objective was to offer only three buttons on the main page which would be focused on the three main activities of the students: a) entering ideas; b) contributing to the idea processing; c) acquiring information (Fig. 1).

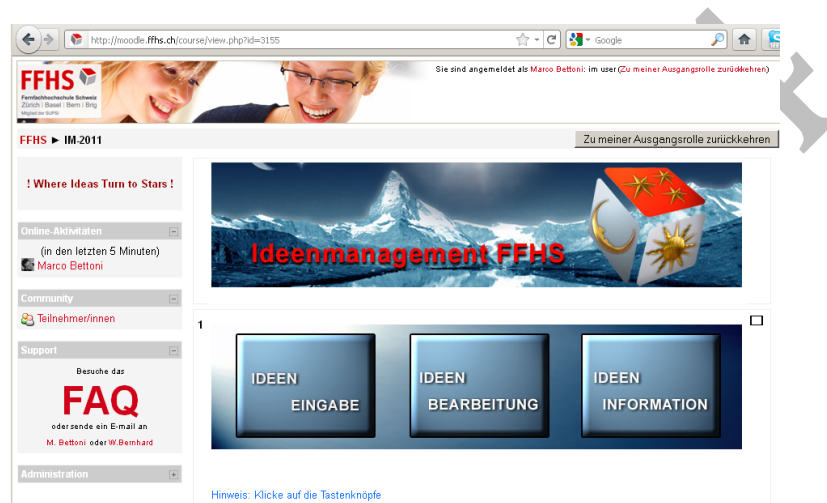


Fig. 1 - Main page of the eCiC online tool (in German)

Clicking on the first button to the left, "IDEEN EINGABE" (idea entry), the student gains access to the idea entry forum where he/she can create a new discussion and enter the idea. In the header of the same page, a short description of the forum is provided as well as access to a set of three one-page manuals describing: a) the eCiC system; b) how to participate; c) how ideas are selected for processing. In order to simplify the interface, the team building forum used for setting up a team of students has been hidden from the students' view; access for the students is provided by a facilitator who publishes a link to the appropriate discussion in the "News" forum.

The second button, "IDEEN BEARBEITUNG" (idea processing) gives access to the idea processing forum where students can select the appropriate discussion from a list (each idea has an own discussion) and read the available posts or post their own contributions. In the header of this forum page, a short description of the forum is provided as well as access to the idea processing wiki where the facilitator at the end of each phase summarises the results of the idea processing. A link to a forum search functions allows students to search for any keyword across all the discussions.

Finally the third button, "INFORMATION" gives direct access to the main page of the idea processing wiki which contains a list of all wiki pages, one per each idea, divided in three sections, one per each processing phase. In the header of this wiki main page, two links provide access to further information: a) the database collecting detailed information about each idea and b) the News forum.

Applications in Education

In the following three examples, we give a couple of suggestions of how the eCiC system could be applied in education for designing school lessons by integrating student input (example 5.1) to ensure the continuous improvement of learning in school, based on student feedback (example 5.2) and for students who want to eliminate personal learning barriers on their course (example 5.3).

1. Subject empowerment with eCiC

What. The eCiC system can be applied to design school lessons by integrating student input. Students collaboratively develop suggestions of how a subject can be taught, regarding their individual interests. To this end, students use eCiC to share which aspects of a topic interest them and on which they would like to focus on as well as how they would design the learning of these aspects. Finally, one or several of these suggestions can be implemented in class.

How. The following steps are one option to empower the students' role as teaching co-designers with the help of eCiC: A) The teacher announces a new teaching topic. Ideally he/she does it as future outlook in order to provide students with some time to work on the assignment. Beside the topic, the teacher also explains to the students what they have to do. That means: he/she invites them to share: a) What they would like to know about this topic and b) How they would like to learn it. Additionally, he/she shows them how to use the platform for submitting and editing their inputs. Finally he/she formulates a couple of guidelines (how the assignment has to be done) and defines deadlines (when the assignment has to be done). B) The students hand in their input by using the platform. They write down in the forum what they would like to know and how they would like to learn it. C) Then, teams are built according to the teacher's guidelines. To this end, students join whichever idea submission they would like to work on. A submission which does not have at least two people who would like to work on it is eliminated. Thus, the number of submissions to be edited will be regulated. D) As soon as the teams have been formed, the groups work on their submission by going through the 3 phases of the model: a) they define the idea by looking at it from different perspectives; b) they look for potential solutions for the idea; c) they define ways implementing it. D) After the submissions have been edited by the teams and suggestions for their implementation have been developed, the teacher starts a vote in class (f2f or virtual). Those idea(s) with the most votes is/are then implemented in class.

Why. With this method, teachers can promote collaborative creativity. It allows students to become active co-designers of lessons by bringing in their ideas and proposals. Thus, the method is a complement to the traditional model of learners vs. teacher. It is expected to attract the students' interest and to engage them to incorporate and share their own views. The method offers the opportunity to empower learners to overcome their perception of a lack of power and influence.

Example. The teacher informs his/her students in autumn that they will be dealing with the topic of "mental disorders" after Christmas and asks them to write down in the forum which elements of this topic they are most interested in. One student suggests exploring the question of how people with a mental disorder go about their daily life. Together with 3 other classmates, he/she first defines the question (What do we want to know? Do we want to know which definition of daily life those people have? Or do we want to know in which way their daily life differs from ours? etc.), before looking for solutions (How can we achieve what we want to know?). Finally they identify how the solution can be implemented to reach the goal (by what can we achieve what we want to know?). In this example, the team decides to invite people suffering from a mental disorder to school to share their individual perception of everyday life with the students. Since most of the students would like to implement this idea, the teacher organises such interviews with the help of his/her students.

2. Continuous Improvement of Learning (CIL method)

What. The CIL method is an application of the eCiC system, ensuring the continuous improvement of learning in school based on student feedback. The value of conventional student feedback is often limited. Mostly students

can decide only between yes or no answers (e.g. did you like the course? Yes/no). Less often they are also asked to explain what they suggest to improve things. But they are virtually never asked to describe how they imagine implementing these suggested improvements. Thus, the CIL method allows students not only to formulate suggestions about what to change in a course, but also to develop concrete solutions as to how to achieve this.

How. For the continuous improvement of the learning process, both from teachers and students: A) Students are invited to submit their feedback by using eCiC. This can be at any point of a course, a lesson, a module etc. and can point to any teaching aspect (teaching methods, subject matter etc.). They write down concrete points in the forum which need improvement, in their view point. B) As soon as all students have handed in their feedback, they start to create teams of two people to edit the submitted input during the three phases of the eCiC method (see 5.1). To make sure that all submitted evaluation points are considered, each student is responsible for finding a classmate who is going to process his/her input at the same time. C) By the end of the third phase, the teams will have identified concrete ways of improving the defect identified at the beginning. These will be collected by the teacher who will discuss them with the students before applying as many as possible of them in the teaching.

Why. By offering students the option to work collaboratively on what they perceive to be wrong or lacking in their learning, they are more actively involved in the teaching quality assurance. On the other hand, teachers benefit from meaningful feedback from students which contributes to the continuous improvement of their own teaching.

.3. Eliminating Learning barriers with eCiC

What. The eCiC method can be applied for students who want to eliminate personal learning barriers within their course. They can use eCiC as an instrument like a megaphone for the teacher and also experience whether other students have the same problem where a better solution would be appropriate. It is a common situation that students experience unreadable slides, overly fast lectures or incomprehensible lessons. But nobody wants to complain or be seen in a bad light by the teacher.

How. With the help of eCiC, the students can share and discuss educational barriers which they explore within the class in a collaborative way. They are not alone with their problem and while using eCiC, they will explore better solutions and possible problem solving ideas which they can provide to the teacher. By using eCiC, they can propose better solutions for the course.

Why. Students are very exposed to a teacher if they suggest better solutions for teaching. Because of this fact, a collaborative suggestion will be more effective, even if it is anonymous and can be delivered to the teacher as a whole, as the opinion of the class.

Example. This example is a real one, made with students on a course. By using the eCiC system, they find out that they can react better and even improve their learning on courses if they give the teacher immediate feedback about good and bad things on the course. For example, if the slides are unreadable or the examples are too complicated. At the end, the collaborative solution of the students was to have a learners' speaker who expresses their concerns to the teacher. In this way, the learners' speaker has an official function for the class and does not speak on his/her own, so the teacher speaks more to a learning-representative of the class than to a student. The students also found a creative solution which helped them a lot to improve their learning together with the teacher.

Conclusions

To create, share, discuss, analyse and cultivate new ideas in a collaborative way is not an easy task, especially when the participants are distributed over a wide area and cannot meet face to face. On the other hand, web-based tools create a great flexibility in space and time for working together in a collaborative way. To be successful, it needs a guided process which must be as simple as possible for the user as well as an acceptance of the tools used. But this is still not enough; when a wide range of people discuss ideas it can go forever if decision making is part of the process. So it also needs a powerful method in the analysis part of the ideas handling. The eCiC system was developed under these circumstances, tested in real cases and improved over time. Technically, we used the open-source learning management system MOODLE, because it is well-known by the students and therefore already

accepted as a common web-tool in learning. The guided process of entering an idea and discussing it is supported by a simple three button design, with the idea that even inexperienced participating users can immediately use the system in a self-explanatory way. The participating user only deals with discussion forums, while the facilitator also has to summarise the results in a wiki. The different roles make it possible to integrate as many interested people as possible without the need to provide lessons on how to handle the system for all. A great help is the use of the solution finder method, which enables switching from a divergent and open thinking phase to a convergent analytical thinking phase for all participants. Before the eCiC system was used with students in learning processes, it had its application in distributed research teams. The solution finder method itself came out when participative decision and solution seeking processes were needed in communities of practice applications within companies. Although the MOODLE system can also be used by other institutions or companies for free, the eCiC does not depend upon this. The concept of eCiC can be setup in other platforms as long as they provide forums for discussions and wikis for information gathering. We can therefore think of future developments of eCiC where other web tools can be used like social networks or wiki-spaces. But our recent tests with social media tools have shown that there are still severe limitations due to the restrictions of rearranging elements in the layout in order to simplify the user-interface.

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Communication and human rights

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Abstract

Communication represents an essential and very important human need as well as a basic human right. The right to communication should be considered in the framework of the freedom of expression and the pluralist democracy. The recognition of the right to communicate is essential to the overall defence of human rights standards. The general right of communication provides to exchange opinions, thoughts and meanings. In this study, it will be dealt with the importance of the right to communicate in human rights concept. The concept of the right to communicate will be discussed in terms of the freedom of expression, pluralist media and the freedom of internet in a democratic society.

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Peer-review under responsibility of the Sakarya University.

Key Words: Human rights, the right to communicate, pluralist media, democracy.

Introduction

Communication represents an essential and very important human need as well as a basic human right. The right to communication should be considered in the framework of the freedom of expression and the pluralist democracy. As noted by Montiel (2012: 15-16), the fulfilment of human rights standards, based on the principles of freedom, equality, solidarity, inviolability, inclusiveness, diversity, universality and participation, is directly linked to the possibilities of communication as a right. Particularly, it must be recognised the existing connection between the right to communicate and those human rights that guarantee public participation. The right to communicate involves other basic human rights, such as freedom of expression, the right to information and universal access to information and knowledge, but also the participation of citizens in decision-making processes about communication and information policies, the promotion of cultural diversity by the media and new information and communication technologies, access of social groups that have historically been excluded from the public sphere to resources and tools to realise their right to communicate and the protection of privacy and confidentiality of communication. The importance of communication as a basic human right is also established in Article 19 of the Universal Declaration of Human Rights: "Everyone has the right to freedom of opinion and expression; this right includes freedom to hold opinions without interference and to seek, receive and impart information and ideas through any media and regardless of frontiers".

Equal access to communication media implies inasmuch a negative duty, to not restrict access to media, as a positive duty, to assure pluralism and diversity. Therefore, when pluralism and diversity are not respected, or not fulfilled, not only has the right to equality been violated, but the right to freedom of expression has been violated as well. An aspect of pluralism is that all groups in society have access to all media (Callamard, 2012: 53). There is a strong association between democracy and respect for human rights.

According to liberal-pluralist approaches (Blanks Hindman, 1997: 3), the role of media in society can be

reduced to four primary categories: political, educational, mirroring, and bulletin board. The political function or role of the media, which includes implied responsibilities of the media, involves the media's role in the U.S. political system, specifically their watchdog role. Here the media are seen as the eyes and ears of the people, passing along information about government and the work of the people's representatives and watching to keep those representatives acting in the best interests of all. In this study, it will be dealt with the importance of the right to communication in human rights concept. The concept of the right to communicate will be discussed in terms of the freedom of expression, pluralist media and the freedom of internet in a democratic society.

The Freedom of Media

The freedom of the media, understood within this interpretation of the first amendment, is based on the distinction between responsibility and accountability. Accountable media cannot be free, for to render them accountable to someone or some institution is to take away their autonomy and to give power over them to another person or institution. According to the libertarian model, the media have very specific roles and functions. In addition, individual members of society have the right to criticize the government, because it operates only with their consent. The media's role, therefore, is to provide the means by which people can both speak out on, and read about the activities of leaders entrusted to protect their rights: The media, with the help of the people, are to operate as an extra-legal check on the government as a watchdog. Logically, then, because of their role as a check on government, the media must be free from government intervention (Blanks Hindman, 1997: 16).

Equal access to communication media implies inasmuch a negative duty, to not restrict access to media, as a positive duty, to assure pluralism and diversity. Therefore, when pluralism and diversity are not respected, or not fulfilled, not only has the right to equality been violated, but the right to freedom of expression has been violated as well. An aspect of pluralism is that all groups in society have access to all media (Callamard, 2012: 53). Pluralism happens to refer to the need to foster the diversity of opinions expressed in a given society, which requires media diversity to guarantee access of every sector to make their culture visible. However, pluralism is hindered by media concentration—expressed that way so as not to call it monopolies or oligopolies (La Rue Lewy, 2012: 58). According to the latest edition of Freedom House's press freedom survey (2014), global press freedom has fallen to its lowest level in over a decade. The decline was driven in part by major regression in several Middle Eastern states, including Egypt, Libya, and Jordan; marked setbacks in Turkey, Ukraine, and a number of countries in East Africa; and deterioration in the relatively open media environment of the United States. The year's declines were driven by the desire of governments—particularly in authoritarian states or polarized political environments—to control news content, whether through the physical harassment of journalists covering protest movements or other sensitive news stories; restrictions on foreign reporters; or tightened constraints on online news outlets and social media. In addition, press freedom in a number of countries was threatened by private owners—especially those with close connections to governments or ruling parties—who altered editorial lines or dismissed key staff after acquiring previously independent outlets. Online social networks, microblogs, mobile telephones, and other information and communication technologies (ICTs) have become an essential means of spreading independent news and information, particularly in environments where the traditional media are under tighter state control.

For example, In Turkey, Twitter and YouTube ban has been evaluated as a heavy intervention into freedom of expression. In the case of Turkey, the recently passed Internet bill allowed for the blocking of websites in cases when personal rights or privacy is violated. The law also empowers Turkey's telecommunications regulator, the TIB, to take executive action without a court order, thereby removing checks and balances (http://freedomhouse.org/blog/q-and-a-turkey-twitter-ban#.U536UsbN0_M, 2014). The decision to block Twitter has been seen as an unprecedented attack on Internet freedom and freedom of expression in Turkey. This measure, brought under Turkey's restrictive Internet law, has showed that the government prevents anti-government criticism. The Twitter block was enacted by the state telecommunications department following an order from the Istanbul Prosecutor's office under powers granted by Turkey's Anti-terrorism Law and additional court orders. The government cited Twitter's failure to comply with court orders to remove content posted on the site as the reason for website's closure (<http://www.amnesty.org/en/news/turkey-pre-election-twitter-shutdown-brings-internet-freedom-new-low-2014-03-21>, 2014). Karlekar (2012) highlights the key threats to media

freedom. Many governments appear unwilling to reform or eliminate the array of laws used to punish journalists and news outlets, and some have been applying them with greater determination. The misuse of licensing and regulatory frameworks has emerged as a key method of media control in a number of semi-democratic and authoritarian settings. Control over new means of news dissemination, particularly internet-based social media, has become a priority for authoritarian governments.

The Concept of The Right to Communicate

"The right to communicate" contains two perspectives: the fundamental and the inclusive. From the fundamental perspective, agreement that everyone has the right to communicate appears to be commonplace. From the inclusive perspective, however, the freedom to exercise any specific communication right and easy access to the resources required to do so may, at times, generate intense debate, even conflict. Freedom requires access to resources. The full recognition of the right to communicate requires that the communication resources be available to meet the basic communication needs of everyone (<http://righttocommunicate.com/?q=node/132>, 06/15/2014).

The discussion on a right to communicate focuses on the conversational mode of communication, and its proponents argue that communication in the sense of conversation or dialogue needs special protective and enabling provisions. Human rights law—in both Article 19 of the UDHR and Article 19 of the International Covenant on Civil and Political Rights—covers the fundamental right to freedom of opinion and expression. Current international human rights standards cover mainly the dissemination of information, the consultation of information, and the registration of information. Practically all human rights provisions refer to communication as the transfer of messages (Hamelink, 2004: 206).

By having the right to communicate and express personal thoughts, ideas, and opinions, people feel themselves treated equally – in other words: Communication validates human equality. Thus the protection and implementation of communication rights represents an essential part of the general topic of human rights. There exist four elements of communication rights (<http://www.crisinfo.org>, 06/15/2014):

Communicating on the Public Sphere: The role of communication and media in exercising democratic political participation in society.

Communication Knowledge: The terms and means by which knowledge generated by society is communicated, or blocked, for use by different groups.

Civil Rights in Communication: The exercise of civil rights relating to the processes of communication in society.

Cultural Rights in Communication: The communication of diverse cultures, cultural forms and identities at the individual and social levels.

Full implementation of the right to freedom of opinion and expression is central to the realization of the right to communicate. Communication is not a one-way process and the right to communicate therefore also presupposes a right to receive information, from both State and private sources. Key elements of the right, elaborated below, include the right to a diverse, pluralistic media; equitable access to the means of communication, as well as to the media; the right to practice and express one's culture, including the right to use the language of one's choice; the right to participate in public decision-making processes; the right to access information, including from public bodies; the right to be free of undue restrictions on content; and privacy rights, including the right to communicate anonymously (<http://www.article19.org/data/files/pdfs/publications/right-to-communicate.pdf>).

The original basis for a human right to communicate derives from the Universal Declaration of Human Rights (United Nations, 1993), adopted in 1948. The centerpiece of the declaration with regard to communication is Article 19, which states: "Everyone has the right to freedom of opinion and expression: this right includes freedom to hold opinions without interference and to seek, receive and impart information and ideas through any media and regardless of frontiers" (United Nations, 1997).

Unesco is the only UN agency with a special mandate to defend press freedom and the Organisation recognizes that press freedom is central to building strong democracies, promoting civic participation and the rule of law and encouraging human development and security. One may argue that freedom of opinion and of expression constitute the cornerstone of any democratic society and a solid and indispensable basis for development. Indeed, the right that guarantees freedom of expression is widely seen as underpinning all other

human rights and democratic freedoms. Unesco's commitment to the fundamental principles for freedom of expression, access to and the free flow of information goes beyond the normative level, beyond advocacy, promoting and enhancing international cooperation. One should stress the other side of the right to freedom of expression, which is the ability to use it. Thus, providing capacity building for media professionals and ensuring media and information literacy skills for each and every citizen permeate Unesco's programme in communication and information (Boafo, 2012:41-42).

Conclusion

If indeed all the world's people should be assisted in participating in the public and private conversations that affect their lives, the international community will have to secure the conditions under which such processes can take place. Conversational communication among individuals and groups -whether in public and/or in private- should be protected against undue interference by third parties. It needs confidentiality, space, and time, and requires learning the "art of the conversation" (Hamelink, 2004: 212). The conclusion for Article 19 and other human rights activists is the following: freedom of expression and equality are fundamental rights and their fulfilment is important so as to benefit the other human rights; both uphold and reinforce each other to promote the other human rights; therefore, there can be no freedom of expression without equality nor can there be equality without freedom of expression (Callamard, 2012:54). Communications must be regarded as a fundamental tool for participation in local, national and international development plans. Such plans must take into account its economic dimensions because communication is strongly related to the access to electronic media, its social dimensions because of the means it provides to building citizenship, and political dimensions because it involves the participation of all.

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INTE 2014

Communication during science classes

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Abstract

Constructivists claim that we get to know the world through of knowledge we possess. Students do not come to the class as *carte blanche*. Their knowledge may be correct or erroneous. The school's task is to transform common misconceptions about the world into correct ideas. The teachers should use open dialogue and students' preconceptions to connect new information with the information already internalized. The article shows students' misconception regarding biological knowledge and a model dialogue in class. Additionally, authors propose a standardized didactic tool: a task which may be helpful in diagnosing the problem.

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Peer-review under responsibility of the Sakarya University.

Keywords: communication, misconceptions, vernacular misconceptions, dialog, science, items;

Communication models

Cognitive psychology focuses on creative problem solving by man. It examines such phenomena as attention, memory, imagination and thinking. One of the central problems of this area of science is answering the question regarding perception of the world by man: do we get to know the external world directly or with the use of representations created by us? Cognitive and emotional processes allow people to order reality properly – to enter into relations with one another and into social relations. These relations rely on dialogue, including internal discourse we constantly hold with ourselves, and exchange of messages with others (Nęcka, Orzechowski, & Szybura, 2013, Maruszewski, 2011). Therefore, in the process of education, provision of opportunities for frequent dialogue with other people, with oneself, as well as with books and media is very important. Dialogues should serve communication. The core of such dialogues is systematisation of personal experiences as well as organizing them into more ordered categories.

In its simplest form, communication consists in transferring a message (communication) among interlocutors in the broad sense. During classes, the information flow is as follows: Teacher → Communication → Student, and Student → Communication → Teacher. Obviously, the presented form of communication may be extended, taking into account such elements as the situational context, number of interlocutors, communication channels, noise and discipline level in the class (Barnes, 1992). For the act of communication to be effective it is important, on the one hand, that the recipient should understand the communication in a manner that was intended by the sender and, on the other hand, that the sender should formulate it in a way that allows the recipient to understand it as intended. Additionally, for complete communication a treating the recipient as a subject is very important. Both sides should aim for efficient communication – the teacher and the student. What is more, communication in school should not be unilateral, but rather multilateral with participation of many interlocutors. Barnes says that teachers have become so used to thinking about the language in the categories of communication that many of them forget that it also performs important subjective functions. Namely, the language is our main means to organize our experience consciously and to think about it. A situation when spoken language in class is limited to

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the teacher's utterance and to students' responses to questions and the written language is no more than rewriting of fragments of textbooks leads to rejection of an important function of language as a tool for transforming one's own experience (Barnes, 1992). For learning consists in identification and interpretation of things that we experience and translating the incoming information into comprehensible language so that it may be permanently entered into our knowledge structures.

One may find numerous models portraying the communication process in the literature. All of them take into account the presence of a sender and a recipient, sometimes in compound, bilateral relations. A vast majority of them assumes content flow from the sender to the recipient. Some models underline the necessity of decoding and interpretation of information by the recipient, which seems to be particularly important in teaching science. For example, the Osgood-Schramm circular model shows a connection between the sender and recipient of a communication, and it indicates what takes place in the participants of the process: encoding, decoding and interpretation of information (Schramm, 1974). Encoding is transforming thoughts into a communication, a selection of words, gestures and circumstances. The communication reaches the recipient where it is decoded and interpreted. Constructivists say that we learn through the knowledge we possess (Piaget, 1964). This knowledge influences the manner in which the recipient reads the communication, what they consider important in it and how they interpret it. What we already know instills the things that we learn with sense (Bruner, 1978). Our perception is mediated by our experiences, thus learning is of active character. Therefore, it is not the sender but rather the recipient who fills the communication with sense. How the communication is read depends on the approach, pool of terms, efficiency of thinking and many other features. In the case of science, the number of "foreign terms" which the student has to internalize, even during a single class, is enormous and exceeds the number of the new terms taken into account in foreign languages textbooks (Grooves, 2010). Due to the fact that school should be the place where the students get to know and internalize a set of terms for describing the world – both at school and in every-day life – it seems essential to investigate the problem of using terms that are new to the students. Efficient communication has unique significance for educational practice. Verbal communication, that is based on semantic knowledge, may be examined in terms of three aspects: semantic, syntactic and organizational. First of all, meanings of terms and idioms should be identical for the teacher and the students; therefore, sharing of concepts is indispensable among them (semantic aspect). In order to avoid distortions in the meaning of a communication, construction of an utterance should be proper and grammatically correct (syntactic aspect). Additionally, it is very important that the teacher's words inspire the students and questions and instructions are formulated in a manner conducive to efficient work in class (organizational aspect).

Communication in class

Kwieciński's studies indicate that up to 80% of words uttered in a class may come from the teacher. Additionally, Kwieciński states that for every other student of a rural primary school literary language (including the language of textbooks) is incomprehensible. They treat it as a foreign language and are not able to master it (Kwieciński, 1995). It seems that teachers, feeling greatly responsible for their work, tend to monopolize communication in class (Barnes, 1992). When they ask questions, they are usually brief, purpose-oriented and hardly spontaneous. Therefore, it seems that a class is dominated by teacher's language. It is true: teachers are obliged to use terms correctly and consequently to make students acquainted with them. However, it is not always the case that the teacher's language is fully understandable to the students. What is more, even in a situation when both teachers and students use the same terms, there is no certainty that they are, in fact, talking about the same phenomenon and understand the problem in the same way. The school situation and the grading system related to school is connected to the fact that student's responses are incited and, often fragmentary. It is difficult to combine them into a whole. Hence, one may infer that the student only answers for the teacher's sake while others do not listen, and so it is difficult to call communication in class a dialogue (Basińska & Pitrala, 2010).

Students' Misconceptions

Imperfect communication between the teacher and students, related, inter alia, to the absence of linguistic and symbolic community and, above all, resulting from the use of scientific terms that seem artificial to the students may contribute to emergence or strengthening of the so-called misconceptions in students. We deal with a misconception in a situation when a person accepts erroneous premises and builds the image of reality surrounding him or her on this basis. According to Page, nobody is entirely free from erroneous assumptions and naïve ideas (Page, 2012). Both students and teachers have them; everybody has them – a young person and an adult, irrespective of their scientific background. Sources of misconceptions may be divided into two major categories: experiential ones and the ones that derive from instruction (Skelly, 1993). Sources of misconceptions may therefore be looked for not only in linguistic misunderstandings which have their beginning in the manner of teaching of science (and other subjects). They may result from an attempt at understanding the world with limited knowledge on the basis of inter-human relations, prejudices or religious beliefs. In 1997 the Committee on Undergraduate Science Education established a categorization encompassing five major types of misconceptions: conceptual misunderstandings, nonscientific beliefs, factual misconceptions, preconceived notions and vernacular misconceptions (Moore et al., 1997). Vernacular misconceptions stem from language confusion (Page, 2012). Chrzanowski et al. distinguished four types of vernacular misconceptions (Chrzanowski, Grajkowski, Żuchowski, Buczek, Walicki, & Ostrowska, 2014). One of the methods of diagnosing, clarifying and correcting students' misconceptions is a discourse between a teacher and his students.

How to talk to students?

Complete understanding between a teacher and a student seems possible only when communication in the class relies on three aspects mentioned above: semantic, syntactic and organizational. As for clarifying misconceptions, the semantic aspect seems critical. Many teachers have worked out methods which may improve the quality of communication with students. They result from teachers' conviction that it is worth talking.

Let us look at a situation when the student's response is not entirely correct. It is possible to tell such a student: "All right, you have not learnt about it; read about it once again from your textbook" or say: "Wrong" or "No, this is not right." One may also draw from such (partially) incorrect answer issues presented correctly and make of them a basis for continuation of the talk and asking questions, addressed not only to a specific student, but to the entire class.

As an example we can take a lesson covering biological terms which seem to be self-explanatory, while using them without clear understanding may actually lead to misconceptions. Students as well as many adults share a misconception that an autotroph is an organism that can feed itself. According to them, such an organism collects, but does not produce food, whereas a heterotroph is an organism that is not able to feed itself (Chrzanowski, Grajkowski, Żuchowski, Buczek, Walicki, & Ostrowska, 2014). What could be a probable dialogue during a science class in a primary school or during a biology class in a middle school?

Teacher: Let us try to tell the difference between an autotroph and a heterotroph. Please tell me, what is an autotroph?

Student 1: An autotroph is an organism that feeds itself.

Teacher: You used – correctly – the phrase "an organism that feeds itself." You have already encountered this term during classes. Can anybody explain what it means that an organism "feeds itself"?

Student 2: This is an organism that gets food for itself.

Teacher: So how does it work? Could you specify what it means?

Student 2: For example, when I go to the fridge and make some sandwiches and nobody helps me with it, so I feed myself.

Teacher: Right, so according to you, what would be a heterotroph?

Student 3: For example my cat, which I have to feed.

Teacher: You are right, your cat is a heterotroph. But is it because it is you who give it a bowl of food? Do you know any other examples of autotrophs and heterotrophs?

Student 4: For example, a tree is an autotroph, because we do not have to feed it, unlike a cat.

Teacher: Excellent. This is a very good example of an autotroph. Where does the tree get food from?

Student 2: My father watered the trees in a garden with a special fertilizer.

Teacher: Hmmm, this is a good clue... but what about trees in a forest? Let's go back to people. Everything that people eat has to be grown, bought or produced. But let us look at the definition of an autotroph in a dictionary of biology...

Subsequently, the teacher explains the difference between autotrophy and heterotrophy and clarifies that in biological language the meaning of these words is different from that in colloquial language.

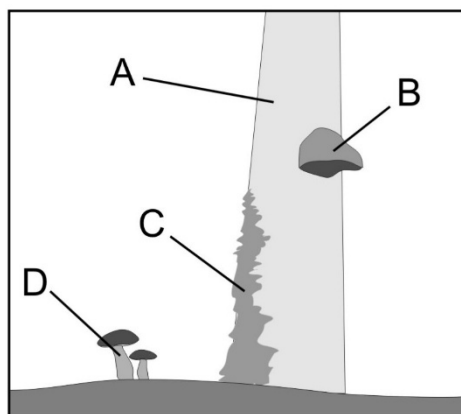
At the end of the class the teacher may test the understanding of the terms by students and find out whether or not students understand the difference between heterotrophy and autotrophy. This is important because, according to studies, some of the students often stick to their misconceptions (Thompson & Logue, 2006, Ross, Tronson, & Ritchie, 2005, Demircioğlu, Ayas, & Demircioğlu, 2005, Kam-Wah 1995).

Problem diagnosis

One of the forms of diagnosing the degree of understanding of the problem described above is the use of a text task. An example of such task, see Fig. 1.

In order to do the task correctly, the student has only to understand the meaning of the terms "autotroph" and "heterotroph" and to know the groups in which plants and fungi are included. The difficulty in the task is the species selection – on the illustration presented two of them (moss and tinder fungus) grow on a tree trunk, whereas others (birch and scaber stalk) grow directly from the ground. Students who did not fully understand the division of organisms into autotrophs and heterotrophs may have been influenced by this differentiation. It is possible to extend or modify the task, depending on students' knowledge about fungi by, for example, introducing organisms that occur in the students' neighborhood.

The picture shows four organisms living in a forest. Their names are listed in the table below.



For each organism answer if it is an autotroph or a heterotroph.

	Organism	Heterotroph or autotroph?
1	Birch	<input type="checkbox"/> Heterotroph / <input type="checkbox"/> Autotroph
2	Tinder fungus	<input type="checkbox"/> Heterotroph / <input type="checkbox"/> Autotroph
3	Moss	<input type="checkbox"/> Heterotroph / <input type="checkbox"/> Autotroph
4	Scaber stalk (a fungus)	<input type="checkbox"/> Heterotroph / <input type="checkbox"/> Autotroph

Fig. 1. Text item to diagnose the degree of understanding of the problem featured in section 4.

Conclusions

The above-presented task is only a clue and one of the examples showing how to work with students in diagnosing and uprooting their misconceptions. In this process it is possible to discern several stages. The first of them consists in determining the assumptions behind misconceptions; the second is an attempt at understanding and explaining why these assumptions are incorrect, whereas the third one should aim at build a version of the world compatible with commonly accepted scientific theories. It is also important to check the students' concepts when they leave the class.

Referring to a simplified image of the world, both by students and teachers, is natural and necessary at early educational stages. However, it is worth bearing in mind that simplifications should not distort the vision of reality. Even though misconceptions – and in particular experiential misconceptions – are very difficult to eradicate, they may be subject transformed into concepts corresponding to scientific theories. This takes place in the course of a process known as conceptual change (Posner, Strike, Hewson, & Gertzog, 1982). The presented approach is one of many methods of fighting against students' misconceptions. Another efficient method is the use of refutation texts (Tippet, 2010).

Students do not come to the class as *carte blanche* (Piaget, 1964). They have their own vision of the world and they try to explain and understand the world in their own way. Such initial comprehension may be erroneous (misconceptions) or correct (preconceptions, conceptions). In the course of instruction misconceptions should be subjected to rectification and replacement by conceptions compatible with scientific knowledge. On the other hand, correct preconceptions should be skillfully handled so that they do not become misconceptions. In the teaching process it is worth paying attention to open and inspiring dialogue between the student and the teacher, a dialogue that ought not always to be followed by grading. The aim of this activity is to examine the scale of the problem along with finding a method of working with students that is relevant to a problem in question.

Acknowledgements

The authors would like to thank Wojciech Grajkowski, Ph.D. from Educational Research Institute for the support and Szymon Żuchowski for the language consultation.

This project is co-funded by European Union within European Social Fund.



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Communication technologies and education in the information age

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Abstract

Today, parallel to developments in computer and communication technologies, the importance of information is ever increasing. Due to the continually developing new communication technologies, sharing and transfer of information in the international scale is getting far easier and the interaction among individuals is getting rather intensified. In an information society, particularly the information technology, the means of telecommunication and computers are used extensively. Moreover, the changes in communication Technologies play a significant role in social life and create new opportunities in the field of education. In this study, there flections of the developments in communication technologies on education will be analyzed.

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Keywords: information society, communication technologies, education.

1.Information Technologies in the Information Age

Communication comes into existence with people and ensures stability in the structure of the society. A society, which transfers its traditions from one generation to the other, becomes long-lasting by way of communication. Media needs of people continuously bring up novelties and developments in the global world. New ideas and new values are disseminated to the whole world via mass media and global communication networks. It is possible to say that the developments in the communication field shape and give direction to the world. An event, which occurs in any part of the world, instantly expands to every single point of the world via communication networks. Mass media, which can reach very wide masses simultaneously, make up a new dimension in the communication process.

Using the mass media, which have turned to a significant part of our daily life, we acquire knowledge on the events, which occur all around the world, and interpret them. "Communication, as a giant market, has become a sector, which increases both production and consumption levels and which directs the world economy. As a result, a giant sector has become a topic of economical, cultural, local area, psychological, anthropological, historical and philosophical research from advertisement to TV shows, documentaries to movies, mutual conversation to persuasion, propaganda, attitude and behavior changes and has increasingly become the focus of sociological researches with differing attitudes and paradigms" (Tekinalp 2009:20).

By way of new communication technologies, changes come up in various fields of human life. Relations of people with each other and with organizations take new forms with the impact of mass media, which are effective in every single field of life. The movement, which brings forward technology as the driving force of social

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changes, is called technological determinism. Marshall McLuhan and Harold Innis are the leading actors of technological determinism movement. Marshall McLuhan, who suggests that the world is formed by communication systems, argues that the world has turned to a global village after expansion of communication technologies and products. McLuhan -the Canadian communication theorist- suggests within the framework of the global village concept that people, cognizant of each other as if living in a small village, will capture the world as a whole.

Individuals of socio-economic and cultural classes in all societies have found communication, which is as old a concept as human history, important along centuries. Due to need of people for communication, we can observe remarkable developments in this area every single day (Büyükbaykal, 2003:185).

The developments in communication technologies, distances diminishing every single day and connectivity of the whole world via internet are the indicators of existence of the global village. However, obtainability of the same technology by the whole humanity to the same extent is a matter of dispute. Some people are not educated-cultured enough to use this technology yet; besides they do not have the same financial sources. Therefore, the global village argument may be subject to criticism in this sense.

Information and the developments in communication technologies have paved the way for a new age called information age. Today information becomes more significant with the developments in computer and communication technologies. There has been a transition from industrial society to information society. Information has turned to a significant foot of globalization. One, who holds information, has the power in a sense. While information used to be an element, supporting production in industrial capitalism, information has turned to one of the most significant production sources; one of the elements, determining circulating and accumulating rate of capital. In the societies going through the globalization process of the 21st century, the information production is regarded as an industry itself. In the present system, information production gains speed every single day and the information at hand grows old as a result. Therefore, information and technology are two complementary concepts. Development of technology speeds up dissemination of information. As technology develops today, societies have to revise and give new forms to educational fields for bringing up individuals with appropriate capabilities for the information age. Modern education systems are reshaped with momentary developments in technology.

"While the new society, replacing the industrial society, is named as 'post-industrial society' in USA, it has been given the name 'information society' in Japan. The first country, preparing a development plan for gaining an information society identity, is Japan. Mausa has contributed to preparation of this plan. Invention of steam engine, the innovative technology on which the industrial society is based, increased the production rate and speeded up economic development. According to Masuda, the innovative technology on which the information society is based is computer technology" (Güçlü, 2005:131). On the other hand; according to Daniel Bell, the heart of post-industrial society is "encoded information" (Bell, 2007:463).

If the historical background of the information society is examined, particularly the impact of radical changes based on technological developments is observed. Notably in the post-Second World War period, the developed countries gave priority to use of information technology and made effort to obtain high efficiency level. On the other hand, there are opinions suggesting that the information society came into being in the 1950's and 1960's in the developed countries particularly in USA, Japan and Eastern Europe.

"Fritz Machlup, the USA economist, had used the concepts "information concept, information economy" for the change emerging in his society in the year 1962. Information society may be used for discussion of a society, where communication is used to a full extent; significance of information and technology production in intense international competition or flexible production systems, which increase in number in production." (Geray, 1997:37).

With the continuously developing new communication technologies, global sharing and transfer of information are facilitated and interaction rate between people increases. Since the societies of our time are structured on information and information technologies, they are named as information societies. Information society is where information technology, telecommunication media and computers are used extensively. Information technologies have an impact on all social dynamics; primarily economy, politics, health, trade, production, transportation, education, culture and publication. Information sharing has gone through transformation with this impact eliminating time and place differences in communication.

Speed of social change and renewal is due to the fact that the internet is the open network system most widely expanding among communication systems. As far as expansion of the most significant communication media,

having an impact on mass communication, is concerned, we can say that it took 74 years for telephone to reach 50 million people; the said period is 38 years for radio, 13 years for television and only 4 years for internet (Sarmaşık, 2011:223).

Upon globalization of technology, constantly renewable communication media speed up circulation rate of information and news in the global area. With the developments in computer and communication technologies today, importance of information increases steadily. "Technology has been positioned as one of the sole elements having the potential to change human life"(Castells, 2005:662).

Information production gains importance in information society with the help of information technologies. The driving force of the information society is information, which is the product of information technology. This is shortly referred to as "computational information"; since computational information is processed and obtained by way of scientific methods and processes within computer systems, it has an objective content. Computational information of the information society is that, which has been processed using information technologies for use in the future (Önur, 2002:105).

1.2. Communication Technologies and Education

Rise of new technologies and information technology restructures the traditional ideas in the education and business medium and transforms them in a sense.

Developments in communication technologies also pave the way for restructuring of the social structure. Novelties in communication technologies and expansion of the information technology influence the education field too. It is possible to say that education has been restructured due to increasing rate of computer use and use of multimedia technologies today. Both primary school students and undergraduate or postgraduate students use the facilities, provided by internet, for acquiring information or doing research within the scope of their assignments. For instance, Finland is the most developed information society all over the world. Internet connection is available in all schools in the country and the majority of the population knows how to use computer. "The individual, carrying on with his education via information networks, confronts an affluent content; he does not solely depend on his instructor/is not passive" (Bozkurt, 1996:191).

Will digital media replace school books in a short term? If children start to prefer computers instead of instructors, will schools be able to maintain their existence in their present condition? It is said that new technologies may not be made a part of the present curriculums easily, they will dig their foundation and will transform them. The reason is that since young people of today's world have grown to the information society, they are more accustomed to technologies of this society if compared with many grown-ups including their instructors (Giddens, 2008:778).

Communication technologies of today change the communication structure of people and organizations too. There is an interactivity now in the communication medium. On internet medium on which moment and speed are highly significant, people may now establish a more intensive communication particularly thanks to new media technologies and social media. Students, instructors, academic members, who use social media as a common ground, communicate with each other and thanks to this new communication system on social media, information can be transmitted to a large community. The new generation, who can communicate by e-mail other than social media, may share information instantly with this facility. For instance, an academic member shares any changes in his lecture schedule with his students using social media; on the other hand, students may show their opinions, expectations or issues relating to lectures or an academic member on a common platform.

Education plays a key role in information society. The common education concept in industrial society gains a personal form in information society and life-long education concept is formed (Crawford, 1991:18). We can say that education gives shape to the society and rises the development rate of the society in a sense. Within this scope, information society is the medium in which information is shared and expands by way of technology. In information societies, bringing up individuals, who are capable of obtaining, using and producing information, becomes more significant increasingly. The fact that developed societies make investments in education and research areas to a higher extent is an undeniable fact.

"Developments in the social area, information sharing rising every single day under impact of information society and higher education level based on information sharing ensure that individuals gain more diverse perspectives about life". Progress in communication technologies plays a major role in information production and transfer, which is one of the common traits of information society. In order to be able to catch the information age and to

be an information society, first of all investment level in this field should be increased and educational competition in the fields of science and technology should be maintained. Significance of continuing education and the value of shared information instead of one, which is kept in hand, should be borne in mind. The most major responsibility in capturing the information age is held by educational institutions.

In information age, people should be more independent as far as education is concerned and should plan and control their career developments. In this sense, continuing learning will be the most significant element of education in the information age (Hope, 1997:11). In addition, people from every single occupation should be given the discipline and motivation to carry on with learning. Since continuing learning will ensure self-development, occupational success will be a plus. Education should be open to people from every segment of society at differing ages.

Peter Drucker emphasizes significance of a continuing education, which is based on a life-long learning in information society, as below: people should receive reiterating education in an information society even if they have completed their education. Continuing education is extremely significant for occupations like physicians, teachers, scientists, directors with higher education level in order to carry on with their education as well as development of societies (Drucker, 1993:248). Step has been taken to information society with uninterrupted attention given to lifelong education.

As emphasized by Masuda, one of the leading figures of information society theory;

- Formal school limitations will be eliminated in information society.
- The present education systems will be replaced by information networks.
- This will fill the gap between developed regions and undeveloped regions.
- Self-learning will become the main form of education. In formal education system, students are given one-sided education by the teacher. However, in an information society, the teacher will adopt the role of a consultant particularly thanks to computerized environment.
- The present education is mandatory and is completed at a young age. In an impermanent information society, education of grown-ups has the same level of significance.
- Mass education will be replaced by an education system, which is proper for individual skills and preferences. In other words, an education system appealing to personal traits will be put into practice (Masuda, 2005:289).

Novalties emerging in the technology area, development of programmes, preparation of educational sources and carrying out new structural changes require continuing training of the education personnel (Numanoğlu, 2014). In an information society, which is given shape under the impact of technology and information, there is a need for competent individuals, who are in search of new technologies. In this sense, individuals of information age of today should be open to learning and research and should improve themselves continuously. Transfer of information gains speed by way of the developments in the communication technology, which eliminates issues of time and space and people can easily establish online communication. Today, it is a commonly observed that education is not given at schools; “distance education” is possible thanks to technology. In recent years, distance education or open education faculties have been founded in many universities and computerized lectures are given; by the hand of these facilities, efficiency of education is not only limited educational institutions. For instance, in a distant education programme, which gives online education, the student may ask a question to the instructor and has the opportunity to share ideas by way of participating in the course actively.

Globalization and technological developments have generated a global market in the higher education area. Higher education have at all times maintained its international dimension up to now –thanks to exchange students, research projects going beyond country borders and international scientific conferences- however we can speak of radical new cooperation possibilities among international students, academic members and education institutions today. By way of formation of internet-based education and “e-universities”, education and other facilities may be transferred to a global audience more easily... Moreover, even long-established universities take steps on the way to being a “e-university”. This ensures that organization consortiums share academic sources, research services, education and student online facilities of each other (Giddens, 2008:782-783). Through this channel, a student in Turkey may use the online library of a university in United Kingdom and do a research. Besides, he may ask questions to an academican of a university in the States and ask for support for the area he is doing a research. However, this requires reaching a technological development level and elimination of both technological and educational infrastructure issues.

People need education, which is a significant process ordering our life in the modern social structure, in every

time period of their lives. Education plays an utterly significant role in information society. The future of a country depends on the education of the community of that country. "Education may be defined as transfer of knowledge and skills from one generation to the other and generation of the terminal behavior in the individual." (Bozkurt, 2005: 278). Development level of a society is in direct proportion to increase of educated people in that society. It should be borne in mind that information is transferred through education; therefore required level of attention should be given to education. In today's society, participation of individuals in rapidly developing information society by way of acquiring new knowledge and occupying a place in life-long learning process is extremely important. Learning capacities of individuals should be increased through widespread use of communication technologies within the education process and education should take its place in every area of life. Therefore, education should be turned to a life-long activity. Education systems of countries should be restructured by taking into account the technological developments and the lacking points in this area should be eliminated for adjustment to the globalizing world of today.

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Communication tools used in teaching and their effects: an empirical study on the T.C. Selcuk University samples

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Abstract

Today communication concept, which has a great revolution with the printing press which has been found by Gutenberg, has no boundary thanks to advanced communication devices and the internet. It is possible to take advantage in many areas, such as from medicine to social sciences or from mathematics to education, from the computers that firstly was produced for the purpose of military services. The use of these developing technologies in the field of education has created a great vision changes in both training and having education. Materials, which can be consider as basic communication resources and used in traditional education has begun to lose its significance, and some technologies has begun to replace of them such as internet, computers, smart boards, projection devices and mobile phone. On the other hand, the programs and applications used in these technologies have also been developed. University students use virtual books instead of the traditional printed book, use cell phones instead of note books, use the Internet and virtual databases instead of the library to research. They even submit their homework with interactive methods rather than printed materials. The traditional education system, these technologies, which increase productivity, have brought a new dimension to education. The aim of this study is to determine the influence of technologies in the learning process of students and to find whether is there any similarities and differences that arise from the their faculty that they have been educated and and their learning process. In addition to this, it is aimed to determine the level of ICT usage of students studying at the university level. In this context, the advantages and conveniences of the technology used by students are also scrutinized. In this study it is used surveys to collect the data. The Data analyzed by using SPSS 16 statistical program with the appropriate testing.

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Peer-review under responsibility of the Sakarya University.

Keywords: Education, communication technologies, the role of technology

1. Communication

Human language depending on word from its birth has gained an importance after the invention of writing. Although it was lost after pronunciation, word has turned into permanent and recordable after invention of writing. Because of this, it is not compulsory for target and source to become together in communication processes anymore. With Gutenberg's invention of removable letters in printing house writing has become diffused to masses and this has increased the variety of language types. In terms of diffusion, variety of language types and speed, human language has realized an important development after invention of telegraph, telephone, radio and TV. With invention of internet the biggest invention of 20th century and diffusion of it for whole society has realized a new development process. How printing house changed the relation between language and writing, similarly invention of internet has changed the relations between language-writing-electronic atmospheres (Yıldırım, et al., quoted by Becel, 2013: 64).

"Digital Revolution" influencing the World has changed people's life styles, health services, political perceptions, environmental arrangements, education and almost all interests and this change is still going on (Tapscott, 1998: Introduction). However, although digital revolution is still going on, basic purpose of

communication has not changed but its form has changed. Especially, communication vehicles has changed, developed and increased in number and their usage purposes have become different (Aksu, et al., 2011: 9). Now people started to use communication vehicles not only for communication but also different purposes. For example, by using social networking sites people can communicate each other and also they can use these sites for educating their colleagues and giving homework to students.

Students, who get and send their homework through internet and take not by using smart phones, form the most meaningful examples of new generation communication methods. Beside this, to use this technologic vehicles and information sources on internet and web sites necessitates a qualified education. Consequently, differences in the quality of education are the most important obstructive factors in front of the beneficial usage of internet. Especially usage of internet by everyone necessitates more talented and active users for it when compared with other communication vehicles (Şeker, 2005: 7). That is why, for beneficial usage of the vehicles of digital revolution such as smart phones, smart tables, tablets, internet etc. not only students but also teachers must be well educated.

2. Education

Education is a factor which serves for development of people as a talented, clever, beneficial, creative, powerful existence and it reveals the skills people have with their births (Gürgün, 2014). Person becomes a member of his or her family after birth and as a social existence person starts his or her education life in primary school, high school or university and continues education life in every moment of daily life.

Education keeps people in mind to raise people according to some purposes and help people to transfer existence culture to others and Education is also name of the process starting in mother's stomach and going on to death. In every time and every situation; new information, skill and behavior can be learned or existing information, skill and behavior can be changed (Erdem, 2004: 73). Education is a vehicle helping people in these kinds of processes.

Education institutions like social institutions have come into picture to provide some kind of necessities. Main purposes of these institutions are to educate people for turning them into beneficial people to their societies. Education institutions have three basic functions which are political, economical and social.

Social Functions of Education is to transfer cultural heritage of society to students and socialization of them.

Economical Functions of Education is to gain students with skills, to turn them into producers and provide qualified and well-educated people for society.

Political Functions of Society is to protect current political system, to raise conscious voters and political leaders. Beside these, every country determines its education policies according to purposes of their political systems (Sarpkaya, 2004: 8-9).

3. Technology

Today very fast scientific and technological developments cause fundamental transformations in social, cultural and economical fields and because of these developments life becomes more complex for people. In order to agree with news conditions caused by fundamental transformations, education systems should be always evaluated and modified according to this reality (Tor, 2004: 197). Technology which helps people to use their knowledge and skills more beneficial consists of combination of some elements in an order and it is a discipline that realizes the role of bridge among science and practice. Technology looking for solutions to problems is a key that turns the knowledge produced by science into useable for humanity (Gürgün, 2014). Information society using this key for its people has more employment possibilities than other societies. People who have adapted themselves to technology and used its vehicles effectively have so many advantages in this technology ages (Yamaç, 2008: 76). In this process technological equipments make person's life easier and they have become indispensable part of people's life.

In the globalized world, technological equipments are used in education similarly with other fields. Education technology which forms with combination of technology and education is an entire system which includes different sub-systems such as data from different departments, practical details of education, measurement and evaluation of education, beneficial usage of manpower, solutions of problems in education, systems increasing quality and effectiveness in education. Education technology has important functions such as designing of

learning and teaching processes, practicing, evaluating and developing. In another words, it is process for making learning as permanent and effective (Gürgün, 2014). It is a normal result that practical education is successful in the fields where modern technology is used. Because, to reach information was so difficult in old times, but today it is so easy by using search engines like Google or Yandex. Beside this, to chat with friends while studying, to plan future, to order something, to take not while listening have become so easy because of technological equipments.

4. Usage Of Communication Technologies In Education

Technological knowledge is so important for development of countries. Today, knowing to reach basic knowledge and producing new knowledge by using basic knowledge is critically important. Another important subject like this is to existence of educated people using technology very well (Yamaç, 2008: 72). In other words, it can be claimed that people knowing to use information technologies find job easily and these people are more beneficial in education. That is why, diffusion of information technologies resulted in new approaches and practices in education similarly in every field of daily life. For shaping education system in accordance with requirements of the era and needs of students serves for the principle of life long learning and it is the best way for the confrontation of learning (Becel, 2013: 65). Technology has affected every aspect of life in the existing conjuncture of the world. Consequently, people of 21st century must have information for learning and teaching to use technological equipments.

Education technology is a complex process which includes people, methods, ideas, and organizational thoughts from revealing every problems of learning to producing solutions to these problems (www.slideshare.net, 2014). In this process, education technologies are always changing and developing.

As showed by different surveys, usage of education technology has positive effects about simplifying learning and

Increasing the permanence in education. The most important prerequisite of reaching modern levels in education is content. However, another important condition is the vehicles and methods used for the presentation of this content. The most important of these vehicles and methods is definitely technology. Today technology is indispensable part of education similarly teachers, schools and books. At that moment, modern world is arguing the computer literacy because information technologies are the important signs of development levels for societies (Odabaşı, 2011). Even ownership or effective usage of information technologies are used as a vehicle to create positive images by people.

Today, to provide qualified and good education to wide masses can be supplied with only education technologies. Because of this, every facility of technology is deeply used. For example, learning supported by computer and internet, distance learning, special programs, CDs for learning, multimedia projection machines, teleconferences, education technologies and practices enrich learning and teaching environments. Traditional education vehicles like blackboard and chalk are being replaced with computers, smart boards, smart teaching methods, internet, smart phones, etc. Even, this progress is going to go smart classes in near future (Gürgün, 2014).

5. Method

Detailed information about research model, population, sampling, data collection tools, practices and analysis will be given in this part of the study which investigates usage and effects of communication technologies in teaching activities.

5.1. Population and Sampling

Population of the study is students of Selcuk University Communication Faculty. According to this 2500 students from Selcuk University Communication Faculty consist of the general population of the study. Sampling of the study consists of 398 students. This number almost constitutes %15 of the general population. This study was realized with 420 students from Selcuk University Communication Faculty in 2013-2014 spring semesters. 22 poll sheets were accepted as missing and they were cancelled. Implementation of scale to general population was realized by researchers.

5.2. The Development and Implementation of Scale

The study is a descriptive study and data were collected by using behavior scale. To measure behavior about the usage of communication technologies by the students from communication faculties, scale designed by Arat (2011) was used. This scale was taken from a doctorate thesis which is "Usage of Communication Technologies in Higher Education Institutions for Teaching Purposes: Example of Selcuk University". The scale consists of a five likert behavior scale which has 38 different items. Some part of the scale was designed from 1, which is "never", to 5 which is "always". Other part was designed from 1 which is "strongly agree" to 5 which is "strongly disagree". Items asking technological possibilities consist of 3 items and they are "yes" and "no". 8 of these items are about "using communication vehicles", 7 of them are about "contacting students with communication vehicles", 6 of them are about "using communication technologies", 6 of them are about "technologic possibilities", 5 of them are about "using communication technologies for education purposes" and 6 of them are about "effects of communication technologies on learning". Also there is another part in which demographic data were collected.

5.3. Data Analysis

Data obtained by polling method were analyzed by using SPSS 15.0. Arithmetic mean and standard deviations of data obtained from each item were calculated. T-test was used for the analysis of the data and because of this findings were obtained. Importance of level control in the study was selected as 0,05.

5.4. Validity and Reliability

To measure behavior about the usage of communication technologies by the students from communication faculties, the scale designed by Arat was used and reliability of this scale was provided by researchers. Beside this, researchers found reliability level of whole scale as Alpha= 0,86. The reliability level of whole scale implemented to students from communication faculty was found as Alpha= 0,70. Cronbach Alpha value was particularly counted in sub-dimensions and the results were showed in Table-1. Alpha value proved the usefulness of the developed scale.

Table.1. Reliability Values

Sub-Dimensions	Reliability Coefficient of Cronbach Alpha
Using communication vehicles	0,59
Contacting students with communication vehicles	0,69
Using communication technologies	0,52
Technologic possibilities	0,60
Using communication technologies for education purposes	0,70
Effects of communication technologies on learning	0,78
Whole Scale	0,70

6. Findings

In this part of the study, data obtained from survey results and statistical analysis of this data can be seen.

The age distribution of students joined the study is seen on Table-2. It is seen that the gender distribution of students joined the study are equal. Generally the age distributions of students are among 18-27. Proportionally is almost %77.

Almost %79 percent of the students have their own computer. Approximately %21 percent of the students do not have personal computers. For whole students, only %20.9 percent has internet connection. In order of students' spending time on internet are almost 1 hour, 1-2 hour, 2-3 hours, 3-4 hours, 4-5 hours and more than 5 hours. Students use internet generally for reading news and emailing. After than; search, chat, e-learning, shopping, downloading files, weather forecasts and play are main purposes of students' internet usage.

Table.2. Demographic Structure

Gender			Age Distribution		
	n	%		n	%
Female	197	49,5	18-22 age	161	40,5
Male	201	50,5	23-27 age	145	36,4
Total	398	100	28-32 age	56	14,1
Computer Ownership			33-37 age	30	7,5
Yes	314	78,9	38 and more	6	1,5
No	84	21,1	Total	398	100
Total	398	100			

Average and standard deviation values of the students about using communication vehicles can be seen on Table-3. According to Table-3, students stated that they use mostly internet for reading newspaper and later they watch TV on internet. Ratings of University Television (ÜNTV) are the lowest level for students compared with other communication vehicles.

Table.3. Using Communication Vehicles

	Mean	Std. Deviation
I watch various TV broadcasts on internet.	2,93	1,083
I listen in various radio channels on internet.	2,74	1,131
I read various daily newspapers on internet.	3,46	1,152
I read various e-magazines on internet.	2,43	1,199
I follow the news by using mobile phone.	2,98	1,498
I watch mobile TV broadcasts with mobile phone.	2,16	1,491
I watch University Television (ÜNTV).	1,79	1,054
I listen in Radio University.	2,06	1,161

According to answers by communication faculty's students who joined the survey, messages about exam results and various announcements are sent to students with mobile phones and this is the most used vehicles for contacting students. Sending homework to teaching staff on internet and asking questions to teaching staff on internet is the lowest used methods. Similarly it is seen on Table-4 that materials about courses and homework can not be send teaching staff very frequently.

Table.4. Contacting Students with Communication Vehicles

	Mean	Std. Deviation
I receive some materials like practices, homework, picture, table, document with e-mail from teaching staff.	2,12	1,175
By using department's web page, I can receive my homework.	2,23	1,172
I can send my homework to teaching staff by using internet.	1,95	1,073
I can ask questions to teaching staff on forum pages.	1,92	1,099
Syllabus and exam schedule are sent to me with SMS	2,12	1,477
Exam results are sent to me with SMS	2,98	1,647
Some kind of announcements are sent to me with SMS	3,13	1,501

Table-5 shows the usage level of communication technologies by communication faculty's students. Students mostly use internet for communicating with friend from their departments. Beside this, students use internet for reaching online database, news groups for education, joining the online forums and reading e-magazines about their study fields. Students use internet with a lowest level for communicating with teaching staff.

Table.5. Using Communication Technologies

	Mean	Std. Sapma
I join news groups on internet because of education.	2,80	1,144
I use e-books for the developments in my department.	2,78	1,127
I use online databases for my department.	2,84	1,188
I read e-magazines about my department on internet.	2,65	1,092
I use internet for communicating with friends from my department.	3,04	1,360
I use internet for communicating with teaching staff.	1,43	0,622

Ideas of the students joining the survey about technological possibilities of the faculty are like this: %57 of the students says that there is adequate amount of computers in classrooms. %75 of students says that there is adequate amount of projection devices. %59 of students says that there is adequate wireless internet in faculty. It can not be said that technological possibilities of the faculty is not enough. However, students can not accept existing technological possibilities as high technology.

Table.6. Technologic Possibilities

	Mean	Std. Deviation
Technologic equipments used in the faculty are compatible with technological equipments in business life.	2,89	1,226
I use technological equipments of the faculty efficiently.	2,76	1,285
Technological equipments in the faculty are adequate.	2,54	1,188

Situations of academic staff about usage of technology for courses are these: Academic staff prepares various power point presentations to show some kinds of materials about courses. For the preparation and presentation of these power point presentations use technological equipments like computer and projection vehicles.

Table.7.Using Technologic Devices for Courses

	Mean	Std. Deviation
Academic staff uses computer for their courses.	2,73	1,057
Academic staff uses computer and projection vehicles to show various material like table, graphic, animation etc.	3,15	1,134
Academic staff uses power point presentations to give lectures.	3,16	1,112
Academic staff uses various suitable movies to give lectures.	2,92	1,194
Academic staff uses various technologic devices to give lectures.	3,07	1,194

Table-5 shows the ideas of students about benefits of technologies while giving lectures. According to this, technologies used in the classrooms increase students' interests for the courses and they make learning easier. Students also think that these technologies increase participation and participation also increases the success of students. Opinion about broadcasts of ÜNTV about courses is not supported by students. It is thought that this situation has different reasons.

Table.8. Effects of Technology on Learning

	Mean	Std. Deviation
Because of technologies used in classes increase my interests for learning.	3,32	1,325
Because of technologies used in classes, I can understand the courses very well.	3,30	1,263
Technologies used in classes make my learning easier.	3,47	1,210
Technologies used for giving lecture increase my participation to courses.	3,15	1,302
Technologies used for giving lecture increase my success.	3,15	1,287
Various broadcasts about courses on ÜNTV increase students' success.	2,49	1,277

T-test results comparing students' gender with usage dimensions of communication technologies are shown on Table-9. Gender of students cause significant differences only about usage of communication technologies for courses ($t=3,973$; $p<0,05$). Communication technology usage level of young boys for courses ($\bar{X}=3.16$) are higher than young girls ($\bar{X}=2.85$). Except this, there is no significant difference for other dimensions.

Table.9. Usage of Communication Technologies According to Gender

	Gender	N	Mean	Std. Deviation	t-value	P
Using communication vehicles	Female	197	2,59	0,607	-0,566	0,572
	Male	201	2,55	0,550		
Contacting students with communication vehicles	Female	197	2,42	0,813	-1,710	0,088
	Male	201	2,28	0,751		
Using communication technologies	Female	197	2,60	0,585	-0,404	0,686

	Male	201	2,58	0,624		
Technologic possibilities	Female	197	2,69	0,872	0,960	0,338
	Male	201	2,77	0,974		
Using for courses	Female	197	2,85	0,811	3,973	0,000*
	Male	201	3,16	0,708		
Effects on learning	Female	197	3,14	0,901	0,135	0,892
	Male	201	3,15	0,874		

P<0,05

T-test results showing the effects of students' computer ownership in terms of usage of communication technologies are presented on Table-10. According to this, students' computer ownership causes a significant difference ($t=3,973$; $p<0,05$) about students' usage of communication technologies. Usage level of communication technology by students who have got personal computer ($\bar{X}=2,74$) are higher than students who have not got personal computer ($\bar{X}=2,57$). According to T-test results, there is a significant difference among students in terms of whether have internet connections or not ($t=2,922$; $p<0,05$). Usage level of communication technology by students who have internet connection ($\bar{X}=2,86$) is than students who have no internet connection ($\bar{X}=2,51$). However, although its reason is not known, ownership of smart phone does not cause a significant difference in terms of usage of computer technologies.

Table 10. Usage of Communication Technologies According to Some Features

	Feature	N	Mean	s.d.	t-value	P
Computer ownership	Yes	314	2,74	0,391	3,681	0,000*
	No	84	2,57	0,357		
Internet ownership	Yes	227	2,86	0,813	2,922	0,004*
	No	83	2,51	0,408		
Smart phone ownership	Yes	309	2,71	0,387	0,752	0,453
	No	94	2,68	0,398		

P<0,05

7. Conclusion

Today technology is used in so many fields. One of the most important of these fields is definitely education. It is not possible to be successful in another field without education. In this study, usage types and ratios of technologic devices in education of university students are shown clearly. Beside this, data were analyzed and evaluated by researchers in order to make contribution to literature.

After this survey; primarily it is an important result that possibilities and functionalities of computers, projection devices, wireless connections etc. must be taken in hand carefully. Moreover, sending messages to students about the results of exams and some announcements is an important and beneficial implementation but it must be continued with some developments.

Internet can be used more effectively by students to send homework and contact teaching staff. Asking questions on online forum pages is a method used by students with the lowest rate.

Intense usage of faculty's web pages will be good for notes, homework in terms of benefits of technology. As it is seen on the Table-8 "Effects of Technology on Education" that positive attitude of students against communication technologies cause intense usage of these technologies and this necessitates to be diversified of technologies.

Although computer is the most popular devices for education, television should be used for education effectively and this is so important for different target groups. Contributions of ÜNTV in education should be increased for students.

Teaching staff should be encouraged to learn and use communication technologies for their courses. According to the results of this survey, it is seen that education without technology affects the success negatively. It is not expected that education without communication technologies is not going to be effective and permanent.

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Community partnerships: teaching volunteerism, emergency preparedness and awarding red cross certificates in nursing school curricula.

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Abstract

Natural, manmade disasters and disease outbreaks are an international experience. Effective response to a public health emergency hinges on a well-prepared interdisciplinary team. Yet nursing school faculty are often perplexed about how to best teach these valuable skills. Based on The American Red Cross Student Nurses Education Model, this presentation will review and demonstrate effective methods to improve workforce capacity and core skills. More than 1,000 nursing students from all over the United States took the American Red Cross Pilot Course designed by Dr. Cheryl Schmidt and her colleagues. As the program expands, hundreds, and potentially thousands, of nursing students will be better prepared to serve as disaster volunteers.

The program presented in this article is based on Dr. Schmidt's and Nowak's research. It reviews teaching strategies that were evaluated using an experimental design examining disaster preparedness skill formation and partnerships with volunteer disaster relief agencies. Results indicated that students, when taught by a brief integrated format, will effectively learn core disaster nursing skills and enlist in disaster volunteer efforts.

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Peer-review under responsibility of the Sakarya University.

Key words: University nursing curricula, disaster preparedness, nursing education, volunteerism.

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Introduction

We live in a time where the probability of a public health emergency involving many casualties is a reality. No one can predict when a disaster will occur or anticipate the devastation resulting from such an event

(NEPEC, 2012). Disasters occur every day somewhere in the world and often have a dramatic impact on individuals, families, and communities. Whether the disaster is natural or man-made, the quality of life is threatened. The top 10 worldwide disasters have claimed over 100 million lives (Hall, 2001). According to the World Health Organization, approximately 75% of the world's population lives in areas at risk for public health emergencies involving flooding, earthquakes, tropical storms, or drought (WHO, 2009). The World Health Organization (WHO) defines disasters as a situation where normal means of support and dignity of people have failed due to a natural or manmade catastrophe (WHO, 2009). Following a disaster, nurses are called upon to provide access to care in hospitals, community medical shelters, or at the actual sites. Their roles demand an efficient model to provide care in these settings.

Disaster planning and emergency preparedness have never been more critical to nurses who may find themselves as part of a front line response team. Today's threats of global terrorism, disease, and natural disasters make learning disaster preparedness skills a necessity for nurses (Veenema, 2009). Nursing education curricula are challenged with the need to provide sufficient clinical content along with content that meets the required competencies for accreditation and regulation. Disaster preparedness and response may be considered "extra" content. The question becomes, how best can educators best teach these valuable skills to students, in the least amount of time, with the maximum effectiveness?

Since effective response to a public health emergency hinges on a well-prepared nursing workforce, it becomes imperative that nurse educators appropriately prepare future nurses. The challenge in disaster nursing education, however, is that many of the existing education models are highly complex, cognitively oriented with minimal emphasis on praxis or learning outcome measures (Nowak, 2009). The program explored in this research study is a practice-focused program with an emphasis on basic skills such as simple triage and rapid transport (START), shelter operations (sheltering of victims), and personal preparedness. In addition, it identifies effective strategies to teach these basic action skills in a brief effective manner. Since effective nursing education for disaster management needs to include skill proficiencies, a well-developed approach is critical to successful learning outcomes.

1.1 Literature overview

In disaster incidents, nurses generally serve in three capacities: a hospital, in a community medical shelter or at the site itself. Therefore, the ability to function in all their capacities is essential. Hospitals are required by The Joint Commission to provide employees with disaster response training to accommodate the influx of many victims in a short period of time.

Competencies can have a significant impact on morbidity and mortality. In 2007, the World Health Organization (WHO) reported a 60% increase in disasters over the past decade (1997-2006) and an increase in the mortality rate from 600,000 to more than 1.2 million worldwide. WHO stated that 75% of the world's population lives in areas affected by public health emergencies involving flooding, earthquakes, tropical storms, or drought (Wynd, 2006). In 2011, there were 81 such disasters in the United States, with an average of 34 disasters each year since 1953. Today's threat of natural disasters, global terrorism, and biological threats makes learning disaster preparedness skills a necessity for nurses (AHRQ, 2011). Research indicates that 75% of nursing faculty members feel unprepared in disaster response. Although there are several published guidelines for disaster management (Adams & Valiga, 2009; Angelo & Cross, 1993; Schmidt, Sanders, Chapman, & Hady, 2011), there is a lack of extensive data on learning strategies and outcomes. Many studies are descriptive in nature and there is no clear agreement addressing core critical skills (CDC, 2012; Deringer, 2011; AACN, 2008; Kaji, 2006). Through the development of a research-based program, educators can apply proven strategies to improve learning outcomes.

1.2 Research underpinnings

The widely cited FEMA disaster preparedness cycle represents a contemporary way of viewing emergency management (FEMA, 2013). This national response framework includes 14 core capabilities. The IDEA (Integrated Disaster Nursing Education and Assimilation) program focuses on six basic skills for health professionals, nurses specifically: planning, public information/warning, operational coordination, shelter services, public health services and communications. These skills are grouped into two categories: personal and professional preparedness.

In addition, the widely referenced International Nursing Coalition for Mass Casualty Education (INCMCE, 2010) presents a comprehensive set of educational modules for educators. Although this information is thorough, the application seems to be self-limiting. Studying such elaborately designed modules is both time consuming and complex, therefore requiring an unrealistic time investment for educators. In addition, governmental agencies have established published guidelines for disaster management (CDC, 2008; FEMA, 2013; IOM, 2009); however, there is a lack of data addressing needed educational outcomes. Most studies found in the literature regarding nursing education are descriptive in nature. There is no clear cohesion regarding core skills needed for nursing curricula (Jennings, 2009; Nowak, 2009; Schmidt, 2011; Weiner, Irwin, Trangenstein, & Gordon, 2005). A research-based program will equip educators with valuable strategies.

The Schmidt Disaster Education Model, developed for The American Red Cross, is the basis of the approach tested in the Integrated Disaster Nursing Education and Assimilation Program (IDEA) program. Schmidt's model was developed over the last 40 years; it emphasizes preparedness skills and Red Cross volunteerism (Schmidt et al., 2011). Similarly, the IDEA program emphasizes personal and professional preparedness and provides students the opportunity to enlist from the "seats of the classroom". In addition, the preparedness skills in the IDEA program are taught in a two-hour format rather than a four-hour time period; this enables educators to more easily assimilate this program into their curricula.

1.3 Purpose of the study

The purpose of this study was to evaluate if a brief evidence-based disaster education program teaches basic skills and fosters volunteerism with community agencies. The program integrated themes from governmental agencies, the Schmidt Disaster Model and educational literature. The intervention tested was labeled IDEA Program (Integrated Disaster Education Assimilation). It is closely aligned with the evidence-based Schmidt Disaster Nursing Education Model (Schmidt et al., 2011) that was piloted with over 1,000 students nationwide.

Although nursing programs are required to teach disaster preparedness (Kuntz et al., 2008), 75% of nursing faculty feel unprepared to teach these skills (Weiner, Irwin, Trangenstein & Gordon, 2005). Preliminary research by Nowak (2009) and Schmidt (2011) indicate that nurses can effectively learn core disaster management skills and foster volunteerism (Jennings-Saunders, 2009; Nowak, 2009; Schmidt et al., 2011).

1.4 Methodology

Conducted at a medium-size university baccalaureate nursing program (N=58), the research design employed a convenience sample and a quasi-experimental design. Data were collected from the experimental and comparison groups at three time periods. Any student less than 18 years old, with disaster management experience or who declined to participate was excluded. Outcomes were measured by the overall number of correct survey answers (score).

1.5 Instrument

The survey instrument developed for The American Red Cross Student Nurse program consisted of 42 pre/posttest questions. Content validity was established by 14 disaster nursing experts (Schmidt, 2011). The instrument evaluated two aspects of disaster response, personal and professional preparedness. Survey items included: 24 items on personal preparedness, 17 items on professional preparedness and one open-ended question

is. A score of one point was given for each correct answer and the total score reflected total correct answers on the survey. The same survey was used with both the treatment and control group over all three time periods.

1.6 Intervention

The IDEA program focused on basic preparedness principals such as: mass medication administration (POD operations), field triage (S.T.A.R.T.), incident communications and family preparedness planning. The treatment group (IDEA Program) and the control group (lecture-driven format) received approximately two hours of education on the same concepts. The treatment group teaching included multi-methodologies and the control group received a static power point-lecture only presentation. The students in the control group were given information on how to volunteer with the community agencies and the treatment group received real-time certificates for volunteer enlistment.

1.7 Procedure

Students were randomly assigned to two groups, one receiving a traditional educational program and one receiving the IDEA program. When surveys were administered and completed, before and after the programs, all surveys were placed in an envelope to maintain anonymity. In two weeks, follow-up surveys were conducted. The researcher offered a brief explanation of implications regarding participation in the study. The survey envelopes were collected by a classmate and delivered immediately to the nursing department supervisor.

1.8 Protection of Human Subjects and Data Collection

Approval for this study was obtained from the university where the data were collected. Strict adherence to the guidelines set by the Institutional Review Boards (IRBs) was met. Students (N=58) were randomly assigned to either a treatment group or control group. This was accomplished placing slips of paper in an envelope with either the words group 1(treatment) or group 2 group (control). The surveys were conducted prior to the educational intervention, immediately after the educational intervention, and two weeks after the class.

1.9 Analysis and Findings

This was a quasi- experimental study using one way RMANOVA. Group mean outcomes measures were compared over three time periods, prior to the programs, immediately after the program, and in two weeks. Normalcy of distribution, homogeneity of variance, and random assignment of both groups was established. The disaster preparedness skills scores of both groups were measured. The survey results (Fig.1) revealed a statistically significant skill improvement between T1 and T2 for both the treatment group and control groups. The IDEA Program initially showed a higher learning level, the retention in two week time period did not show a significant improvement over the control group. As discussed previously, the Schmidt Disaster Education scale was applied. The total score is a possible 41 points, and one open ended question was present on the survey. Higher scores indicate greater general skills attainment.

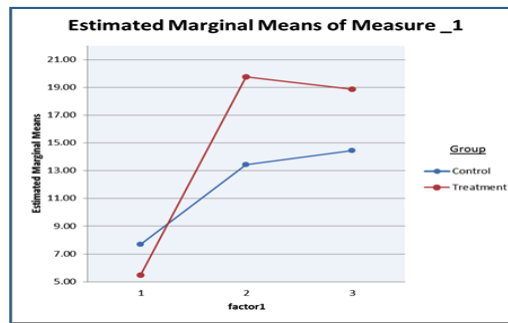


Fig.1 Treatment and control group. Estimated marginal means significant at $p=0.05$ level for multiple comparisons (Bonferroni's applied).

1.10 Limitations

Threats to external validity include: students may not have had adequate time to reflect on class concepts, the results reflect voluntary participants, and the sample was representative of a particular cohort. The post-hoc power analysis revealed the study was under-powered. Replication and extension with broader and more diverse samples are needed.

1.11 Conclusions

The evidence suggests that when taught in a brief format, using the IDEA program will yield higher learning outcomes compared to traditional teaching methods; in addition, it yielded 100% volunteer enlistment. This program, like the Schmidt model, improves personal and professional skills as well as engages students in volunteerism. It further identifies, develops, fosters, and strengthens new and existing coordinating structures to create a unity of effort (FEMA, 2013).

Table 1. Educational Strategies Addressing Disaster Preparedness

Personal Preparedness	Concept	Teaching Strategy
Disaster Shelters	<p>Public health emergencies may result in three scenarios: home isolation (shelter in place), community shelters and hospital care.</p> <p>Home. Supplies should include: water and protein sources and a possible backup generator.</p> <p>Community. Provided in buildings where displaced people are housed.</p> <p>Hospitals. Hospitals are required to have disaster response plans.</p>	<ul style="list-style-type: none"> Film. Show film clips from the movie Contagion: You tube video clips available at: http://www.youtube.com/watch?v=zAhz0AORXPc Table top simulation. Practice community based shelter operations by a table top simulation. Create movable pieces, similar to a puzzle enabling students to develop a shelter. Shelter Assessment Tool. Virtual practice with CDC assessment tool available at: http://www.bt.cdc.gov/shelterassessment/pdf/shelter-tool-form.pdf
		<ul style="list-style-type: none"> Film. Show I.P.A.W.S. film available at:

Communications Plan	Plan for where and how to meet your family and program emergency contacts. Learn text messaging & set up disaster alerts.	http://www.youtube.com/watch?v=ptk5Oi3P2to . <ul style="list-style-type: none"> • Cell Phone. Real time programming with emergency contacts and emergency alert system I.P.A.W.S.
Evacuation Plan	Know the major local highways. Prepare a "go bag" with: a sleeping bag, medical information, a small amount of food such as 5 gm. of protein each day per person (e.g. one table spoon of peanut butter equals 5 gm. of protein).	<ul style="list-style-type: none"> • Written Plan. Construction of plan using FEMA guidelines available at http://www.ready.gov/make-a-plan • Survival Kit Contents. Available at: http://www.redcross.org/prepare/location/home-family/get-kit • Emergency check list. Available at: http://www.cdc.gov/ncbddd/hemophilia/documents/familyemergencykitchecklist.pdf
Professional Preparedness	Concept	Teaching Strategy
Simple Triage and Rapid Transport(START)	An international technique used as a means of sorting disaster victims. This 18-step skill can be effectively taught in three steps in approximately 1 hour using the 32 Q mnemonic (Nowak, 2009). /	<ul style="list-style-type: none"> • Neuro-cognitive teaching strategies. Use the mnemonic 32 Q at least three times; enhance visual memory by displaying 32 Q at least three times on the screen. • Simulation. Use injury scenarios placed in a PowerPoint presentation employing virtual practice. START PPT Training Module available at: http://www.pitt.edu/~super1
National Incident Management System Language (NIMS)	Coordination of all aspects of public health emergency management by learning select terms such as shelters, Point of distribution, national incident management system and incident commander.	<ul style="list-style-type: none"> • Discussion. Discussion of key incident command terms needed to function in shelters. Available at: http://www.fema.gov/emergency/nims
Shelter/Point of Distribution (POD) Nursing Roles.	Practice nursing roles such as Distributing medication to population aggregates (POD) or serving those evacuated in shelters. Offer a real time volunteer enlistment opportunity.	<ul style="list-style-type: none"> • Simulation. Table top simulation with movable pieces similar to a puzzle. enabling students to develop a shelter and a POD. • Music. Stress reduction music during the table top simulations. • Interactive Power Point. Movable PowerPoint to critique table top simulations. • Certificates. Offer certificates of completion (DHHS or Red Cross) that enable students to serve as disaster response volunteers.
Professional Go Bag	A bag of nursing supplies and supplies to allow the possible overnight service in a shelter operation.	<ul style="list-style-type: none"> • Demonstration. Discussion and demonstration suggested go bag for nursing professionals.

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Community-based eco-pedagogy towards change of parents' lifestyles in South Korea

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Abstract

Within the context of global marketization and digital technology revolution, consumer dependent lifestyle has increased in the Korean society. How can we contribute ourselves to regenerating a community alternative to the anthropocentric, materialistic, and consumer based society? This study was a part of community-based education project supported by the Brain Korea 21 Plus Eco-Edu System Research Team in South Korea. This project aimed at giving parents the opportunity to rethink of their anthropocentric lifestyles, to be equipped with ecological knowledge, and to live a sustainable life. Data were collected throughout six months in 2013. With a joint collaboration of L child care center, we provide 10 sessions of community-based eco-pedagogical program. Data sources were 10 individual interviews, 3 group reflective collective interviews, seminar activities, reflective writings, and observation notes. Four gradual important changes were found. First, participants become aware of their prior human-centered lifestyle. Secondly, they experienced a perspective shift. This was the starting point for recognizing the interdependency between nature and humans. The experiential nature of continuous social discussion and individual reflection invites participants to challenge their fundamental thought and attitude about nature and life. Third, the health education promotes them to be critical food consumers. Finally, parents need to know how to make connections between ecological knowledge and action. We need to grasp that possibility in community-based education, including ecological education, health education, consumer education and education for the sustainable and life-circulated society. These gradual opportunities for community members, including parents, would be the source of important means of promoting ecological sensibility, knowledge, and eventually individual and social action.

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Peer-review under responsibility of the Sakarya University.

Keywords: Community-based eco-pedagogy; Eco-centered Early Childhood Education; Parent involvement Introduction

1. Introduction

Within the context of global marketization, digital technology revolution, and mass production and manufacture, consumer dependent lifestyle has increased in the Korean society. One of the crucial problems of our (possibly) already-habituated human-centered lifestyle is that we could be a main agent who unconsciously participates in the destruction of environment and ecosystem. How can we contribute ourselves to regenerating community alternative to anthropocentric, materialistic, and consumer based society?

Ecological awareness and knowledge alone does not guarantee nature-centered lifestyle. Therefore education should be designed to promote their action. How can we, as educators, help community members, particularly, parents of young children hold a sustainable lifestyle? In Korea, there have been a continuous effort to help children, teachers, and parents be self-conscious of the ecological crisis on the globe and develop ecological awareness and their responsibilities. Eco-centered Early Childhood Education (in Korean educational journals, Eco-early Childhood Education is prevalently used) and Forest Kindergarten movement are successful examples in Korea.

Community-based eco-pedagogy promotes both ecological consciousness and action of community members. The philosophical background came from *nature-centered* worldview. It is beyond the human-centered or

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environmental-friendly point of view. The meaning of “eco” in the Western paradigm corresponds to “environment.” Therefore, the discourse of ecological awareness has been focused on environmental consciousness and ecologically friendly action (Eryaman, Yalcin-Ozdilek, Okur, Cetinkaya & Uygun, 2010). The meaning of “eco” within the Eastern paradigm, for example, Eco-centered philosophy (Lim, 2006), is “nature.” Since, in this perspective, it is presumed that nature is located above human, life solidarity between nature and human is emphasized.

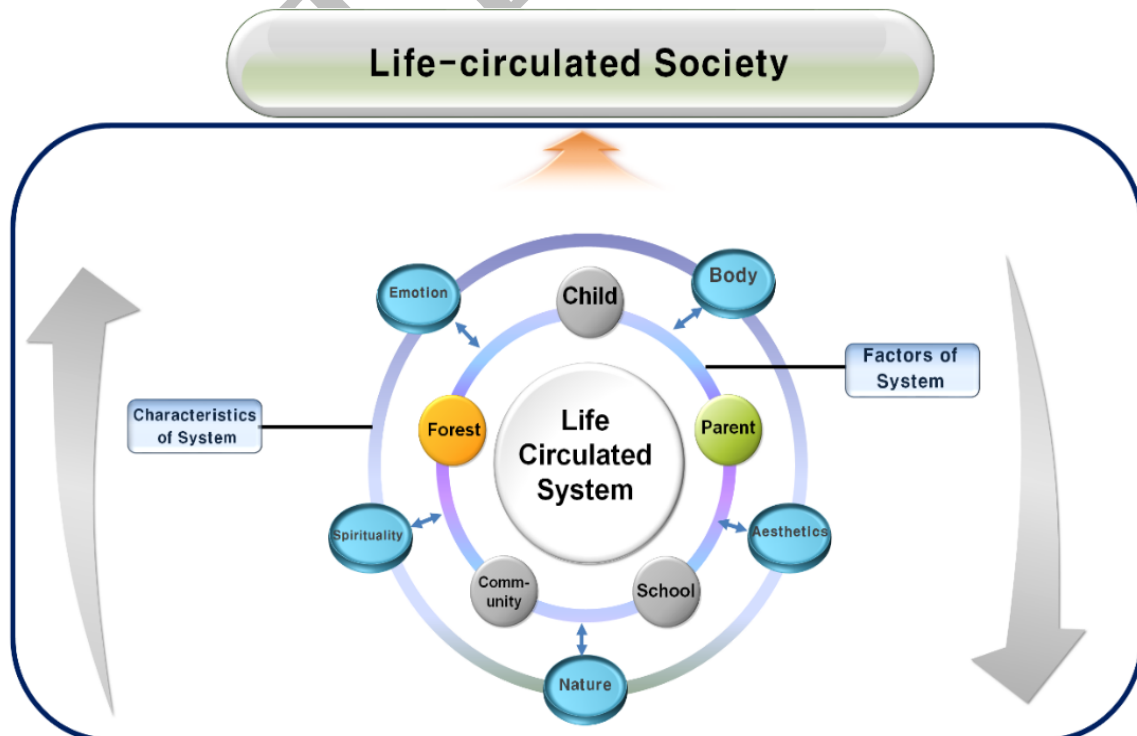
This research was a part of community-based eco-pedagogy project performed by the Brain Korea 21 Plus Eco-Edu System Research team. 10 parent education sessions were provided. Through this program, parents have opportunities to rethink their human-centered lifestyles and explore ecological knowledge together for community change. Such an educational movement and practice have definitely contributed children and teachers’ awareness of the larger world, that is, nature. The purposes of this study were to investigate parents’ gradual development of ecological awareness and their action through the community-based eco-pedagogy. The overarching question of this study is described.

1. What are the big changes of parents through the community-based eco-pedagogy program?

2. Methodology

2-1. Brain Korea 21 Plus Eco-Edu System Research Project

The Brain Korea 21 Plus, funded by NRF (National Research Foundation of Korea), was implemented in 2013 for fostering future-oriented human resources and enhancing the research capabilities of graduate students in the knowledge-based global society of the 21st century. The focus of Brain Korea 21 Plus Eco-Edu System Research Team is to enhance the educational and research competencies of graduate school students in the department of early childhood education of Pusan National University and, at the same time, to make a real contribution to the local community. The central research theme is to build an Eco-Edu system for life solidarity of children, parents, schools, communities, and forest, that is, nature.



(Brain Korea 21 Plus Eco-ECE System Research Project, 2013, p.5)

Figure 1. The Introduction of Brain Korea 21 Plus Eco-ECE System Research

2-2. Community-based eco-pedagogy: Eco-centered Early Childhood Education

This study was a part of community-based education project supported by the Brain Korea 21 Plus Eco-Edu System Research Team. This project aimed at giving parents of young children the opportunity to rethink of their human-centered life styles, to be equipped with ecological knowledge and parenting competencies, and to live a harmonious and sustainable life. Within the program, 4 lectures, 3 workshops, and 3 activities were provided in the first phase. It was a collaborative and participatory stage, for both parents and researchers, to be conscious of their human-centered thoughts and behaviors, to explore new ecological knowledge and ideas, and to implement action for change.

2-3. Research Site and Participants

L child care center located in Pusan metropolitan city is operated by the philosophy of Eco-centered Early Childhood

Education. We were granted permission to study this child care center from a director, 10 teachers, and 48 parents. Participants in this study were 10 parents. Participation was on a voluntary basis.

2-4. Data Collection

Data were collected throughout six month in fall, 2013. With a joint collaboration of L Child care center, we provide 10 sessions of community-based eco-pedagogical program. Data sources were 10 individual interviews, 3 group reflective collective interviews, seminar activities, reflective writings, and observation notes.

2-5. Data analysis

Data were first transcribed in Korean. Based on Brenner's (2006) analysis of qualitative data, the procedure of data analysis was divided into five phases: transcription, description, analysis, interpretation, and display. Initial codes were divided into seven theme codes which represented core ideas that came from data. Through a repetitive process of coding, the data were reduced into four themes. At the final stage, that is, display, Korean transcripts were translated into English. To ensure validity and reliability, a cross-check of findings: triangulation was used. For a cross-check, "the multiplicity in the means and types of data gathered is important" (Canagarajah, 2006, p.156). To avoid subjective interpretation, we worked with a variety of oral and written data and three researchers.

3. Four Big Changes

All findings deserve to be discussed; only four important changes of parents will be described here. First, participants become aware of their prior human-centered lifestyle. Secondly, they experienced a perspective shift. Third, the health education promotes them to be critical food consumers. Finally, parents need to know how to make connections between ecological knowledge and action.

3-1. Being Aware of Their Prior (Human-centered) Lifestyle First

First of all, most of participating parents seemed to be lacking ecological awareness due to lesser ecological educational experiences from families, schools, workplaces or mass media prior to their child's kindergarten year. Some parents had spent one or two months in becoming conscious of their own lifestyle.

I might have simplified the importance of having an ecological mind. I have kept told my daughter to take care of trees and flowers; I didn't. Definitely, we all have a human-centered mind. We might talk about environmental crisis. However, we seem to live in a same way as usual.

The excerpt above demonstrates K mother's reflection on mind and lifestyle based on the anthropocentric perspective. In the first and second discussion, it has been said many times that "we might have lived in a human-centered way."

We might have lived in a human-centered way. Lifestyle upon the human-centered paradigm can be destructive to both human beings and nature. I might have thought that the more I consume, the better I live.

The ecological paradigm promotes coexistence of nature and human. This project encourages engagement with the natural world by asking existential questions. Questions remind participants of rethinking about human-centered attitude, mind, and lifestyle.

3-2. Perspective Shifts: Asking Questions of Existential Reasons

During and after every session, parents engaged in open dialogue with other participants and researchers about their thoughts of life and reality. By asking questions of existential reasons including "where do we come from?" "why do we live?" or "where should I head for?" some parents seemed to experience a slight perspective shift. For example, one mother said that "In my case, it was more like a perspective shift."

In my case, it was more like a perspective shift. I have not seriously thought the relationship with nature. I thought that trees, rivers, mountains, and even food are just out there. I might have simplified the important part of my life. Yes, I am part of the nature.

An eco-pedagogical key to raise awareness of environmental thoughtfulness was to give them opportunities to ask existential questions. Such practical self-awaking questions seems to make them be aware of their binary logic pervasive in nature and human. Participants seem to "become something other beyond our rationally assumed and narrowed sense of self" (Payne, 2010, p.296).

Rarely did my husband and I take time to uncover the reasons for living. We were more passionate about our daily routine and work. So busy. But busy for what? I am pleased to say I have seen my attitude change in my ordinary life.

The Western consumer lifestyle based on the Western mind-set such as individualism, development and progress, a human-centered worldview (Bowers, 2001) permeate into everyday life. Such an attitude leads to a distorted understanding of relationship between nature and humans and degrades the role of environmental protection.

Being a Critical Food Consumer through Health Education

One of the project seminars involved parents in talking about food production and consumption. Topics were related to the questions of where the food come from, how it was produced and distributed, and why it is important to know the food circulation. For example, one of the parents engaged in dialogue about how not to be

a “stupid food consumer” and to protect the local environment. The reason why the parent referred to the word “stupid” is because she has not thought about the actual mechanism of controlling the direction of food production and consumption.

I became aware of the larger system of food circulation. I did not know the actual mechanism of food production and consumption. We might be too passive.

One of the participants identified the importance of ecological education (health education) as follows:

I think not only children but also parents need to be educated on the importance of food consumption and the following effect on our body and nature including the environmental crisis. At preschools, parents and their children should be encouraged to gain important knowledge about food production, consumption, and distribution. It is not easy to gain detailed information about the relationship between food consumption and environmental issues even from media.

Parents could learn the eco-system of the natural world by the topic of health education. They mentioned that it was difficult in everyday life to see how food came to their lives. Remarkably, practical ecological knowledge is constructed by understanding of reality through their own personal experiences such as food consumption. By beginning talking about living boundaries between nature (food) and humans, some participants emphasize interrelationship, life exchange, and life solidarity between human and nature. Throughout the project, there were discussions that reflect a deeper understanding of the interdependencies within human communities-and between humans and nature.

3-3. Help us Make Connections!

One of the difficulties for both parents and researchers to take action together was to make connections with their ecological knowledge and their action. Since the social and cultural atmosphere around participants was not an eco-friendly mood, it is required to keep creating an atmosphere to raise environmental issues and encourage the eco-centered lifestyle and parenting attitude. Participant parents’ capacities to address the environmental issues from their own life style and communities’ culture was prominently improved. For example, one of parents who participated in the community-based eco pedagogy argues that:

I think parents in local community should have opportunities to reflect our own lifestyle and parenting style through workshops, discussion groups, or learning communities. Not through the lecture type. Whenever I participated in workshop, it was not a real workshop. Someone, maybe an expert, had prepared their lectures and talked about it. That’s it. However, this project gave us an opportunity to recognize our human-centered attitude and the subsequent environmental problems.

We might need to come together to find important and achievable ideas to live a sustainable life in our local community. Having a conversation about “food circulation,” “father shock,” and “consumer-based capitalism” was really informative to me. I have tried to inform my husband about the importance of fathering in the early age. He did not listen. I hope we can find a way to persuade HUSBAND to participate in this project!

As shown above, to help community members make connections did not mean to give series of expert-led lecture with ecological topics and environmental issues to them. Participants understood reality and difficulty through their own personal experiences. Community members’ attitudinal shifts and behavior changes necessarily include the process of reflection of their own lives.

4. Discussion and Implication

The purposes of this study aimed to improve parents' sensitivities towards nature, parenting style and life, and to achieve ecological literacy (Orr, 1992) through the community-based eco-pedagogy. This project was an important beginning stage where professors, parents, and teachers in child-care centers and kindergartens participate together to hold a sustainable life. Throughout the first stage of the community-based eco pedagogy, parents recognized the main positive result as raising awareness of their consumer dependent lifestyles which were founded upon the anthropocentric perspective.

First, this project provides participating parents with ecological openings in (re)thinking and changing their life attitudes, and becoming other than what they currently are. The current eco-pedagogy promotes moving towards the possibility of eco-centric attitude. As we have ignored the underlying social and cultural roots of the ecological crisis, it was important to be aware of our habituated human-centered lifestyle first. Without clarifying reality through their own personal experiences, they might produce and reinforce the anthropocentrism.

Secondly, the experiential nature of continuous social discussion and individual reflection invites participants to challenge their fundamental thoughts and attitudes about nature and life. Ecological awareness is always both social and individual. Therefore to nourish ecological life, it is necessary to focus more directly on the deep assumptions about the interrelationship between nature and humans. As Lee (2013) suggested in her dissertation with the topic of multicultural education, creating learning communities within, between, across schools could be key to give community members opportunities to improve ecological literacy. One of the profound ways that community members recognize the interrelationship between nature and human was the health education. Topics about food production, distribution and consumption leads to thinking of the environment as not just 'natural resource' but 'nature itself.'

Finally, parents seem to be able to understand and apply ecological philosophy more effectively when educators help them make connections. This process was an important step where university professors, researchers and community members work together to make a sustainable society. Throughout this study, it was revealed that the ecologically centered culture should be shaped in order to promote community members' individual ecological action.

It is important to know our environments-global, national, local, social, and individual spaces. It is also crucial to know our interactive positioning of nature and us. As Buell (2006) and Payne (2010) suggested, being ecological literate could be a remarkable means to promote an active and participatory eco-citizen in local community, in this study, child care center and parents. We need to grasp that possibility in community-based ecological education, including health education, consumer education, eco-aesthetic education (Payne, 2010), eco-literacy education (Buell, 2006), eco-justice education (Bowers, 2001), eco-art education (Inwood, 2013) and education for sustainable and life-circulated society. These gradual opportunities for community members, including parents, would be the source of an important means of promoting ecological sensibility, knowledge, and eventually individual and social action.

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INTE 2014

Comparative analysis between the institutional development plan and strategic planning methodologies: the case of the Federal Institute of Education at Minas Gerais - Brazil

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Abstract

This article presents a comparative analysis of the Institutional Development Plan (IDP) of the Federal Institute of Education at Minas Gerais (IFSULDEMINAS) with the methodologies of Strategic Planning. Starting from a historical review of technical education in the country since the creation of the schools of apprentices until the formation of the federal education schools the article examines the role played by the IDP in this institution and if the IDP can be seen as a strategic planning methodology. The case study included interviews with current managers of the IFSULDEMINAS and analysis of organizational documents. We found that the PDI and Strategic Planning methodologies are similar in their development process. However, it was possible to conclude that the PDI methodology still demands improvements.

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Peer-review under responsibility of the Sakarya University.

Keywords: Strategic planning; technical education.

Introduction

The Federal Government of Brazil, through the Ministry of Education and Culture (MEC) and its Program for the Expansion of Vocational Education (Proep) has transformed many isolated technical schools in Federal Institutes of Education Science and Technology. The union of three technical schools at Minas Gerais gave rise to the Federal Institute of Science and Technology Education (IFSULDEMINAS) administered by a rector installed in Pouso Alegre.

This study starts with a historical review of technology education in Brazil and the legal requirements that emerged with the transformations that have occurred over time. The methodologies of strategic planning were compared with the Institutional Development Plan (IDP). After this comparisons and analyzes, it was carried out a survey with managers of the IFSULDEMINAS for checking the similarities between both methodologies.

The history of the Federal Institutes of Technology Education begins in 1906, when the President of Rio de Janeiro created four professional schools (NUNES, REINATO, ROSA, 2009). The purpose of these schools was to supply industrial demands that were emerging in the country. During the 100 years, these schools have gone through several transformations. In 1937, they became high schools intended to supply mass production companies. In 1959, these schools acquired teaching and management autonomy (NUNES, REINATO, ROSA, 2009). In 1978, the first Federal Centers for Technological Education emerged. The National System for Technical Education increased the emergence of a Federal Network of Vocational and Technical Education in the country, transforming the federal technical schools in Federal Education Centers (CEFET).

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In 2004, the decree 5154, enabled schools and students freedom to choose which educational model to follow. In the same year, the Federal Network of Technical Education was free to create and deploy courses at all levels of professional and technical education. Finally, in December 2008, Law No. 11,892 created 38 Federal Education, Science and Technology. By the transformation and integration of Federal Centers for Technological Education. The changes that occurred were not only in nomenclature. Supervision became the responsibility of the MEC; the form of admission became to be through entrance exams.

The IFSULDEMINAS emerged in 2010 from the amalgamation of three independent institutes located in the same region. Currently the institute has a rectory located in the city of Pouso Alegre. I also has five campus located in the cities of Machado, Muzaffarnagar, Passos and Poços de Caldas. The institute offers courses at all levels of education except doctoral degree.

2 - PDI and Strategic Planning

With the transformations that have occurred in technological education, new legal requirements emerged and the Institutional Development Plan (IDP) is one of them. This requirement resulted from the transformation of Institutes in Higher Education Institutions, placing them under the responsibility of the National System of Higher Education Assessment (SINAES). In April 2004 it was established the obligation of the IDP. From May 2006, the plan needed to be carried out for the period of 5 years and should contain elements that identify the IES as its philosophy, mission, teaching guidelines, financial, organizational structure and academic activities, current and desired features for years to come. According to Francisco, Nakayama, Oliveira and Ramos (2012) the PDI consolidated the institutional policies and became the guiding instrument to help the schools to reach the effectiveness of the teaching and learning.

Rami and Spers (2007) define the importance of PDI in the context of the Brazilian reality as a conductor of strategic planning.

The concept of strategic planning emerged as a military concept to gain advantages over the adversaries (BERGUE, 2011). Following the military organization, companies began to assess their strengths and weaknesses, opportunities and threats of the environment, with the goal of placing in the top position of your competitors.

The process of developing a strategic planning involves analyzing the vision, mission, values and principles of the organization, firstly, based on this information takes place plans that meet these characteristics who seek a prominent position in the business market (OLIVEIRA, 2013). The purpose of planning is to define actions, projects and business objectives, assessing its consequences in order to reduce the uncertainty involved in the decision making process. Planning is an activity performed routinely and in order to achieve a purpose it is essential to organize actions to achieve goals (MATOS, MATOS, ALMEIDA, 2007). For this to happen a continuous analysis of the external and internal environment is necessary.

The strategic planning process can summarized in four steps. The first stage is responsible for operating organizational environment, values and vision. In a second step, it is necessary analyze how to gain competitive advantage over competitors. The third stage of planning summarizes to define the goals, strategies, policies and guidelines of the company. To complete the drafting process, the fourth step, control and evaluate the activities planned for them to meet their specific goals.

Strategic planning is an ongoing process, as the constant reevaluation of proposed actions to apply to achieve their goals is necessary. This continuous controls, and corrections applied where necessary, are actions that allow the development planning that meets the business needs. The process to be correct and efficient requires a thorough knowledge of the organization, the aspirations and determination of its future desire.

Some authors studied the strategic planning applied to Higher Education Institutions (FERNANDES, CORRÊA, NOVAES, VIANA, 2009). According to the authors universities are increasingly adopting strategic planning, considering that this is vital tool in the development of a modern social institution.

The complexity and dynamics of planning at Brazilian higher education institutions are linked to governance issues that change with the opinions, case law, revocation and creating laws, ordinances resolutions, provisional measures, often created randomly and immediate manner, seeking solution (ROCHA, 2005).

By conducting a comparative analysis between the institutional development plan and methodology for strategic planning, Mizaël (2012) concluded that the PDI is an excellent tool for public management of Federal

Institutions of Higher Education (IFES), as a mean of pursuing excellence in teaching, research and extension, as well as achieve their goals with effectiveness, efficiency and public transparency.

Despite the PDI have arisen from a legal requirement of the MEC for Higher Education Institutions it seems that it is very similar to strategic planning (FERNANDES, CORREA, NOVAES, VIANA (2009). Andrade and Tachizawa (2006) also see similarities between Strategic Planning and PDI affirming that both, rather than a static document, should be seen as a management tool that contains early decisions about the line of action to be followed by schools in fulfilling its mission. According to Rami and Spers (2007), PDI follows an "official script", predetermined by the MEC for bureaucratic purposes of accreditation and follows the methodology of strategic planning. The PDI therefore represents an excellent opportunity to assess the situation before, understand the present and the plan for the future, allowing mapping the direction that the institution can track and project the future position of the institution in the market.

For Bergue (2011) there is no conceptual incompatibilities between instruments. According Schmitt and Mafrá, (2003) similarity is evident, but not its applicability and only through research is possible to know the applicability of this instrument in each institution. The authors cast doubt on the effectiveness of the Institutional Development Plan by saying that the plan guides the IES in their actions, but does not help the institutions think strategically.

3 - Methodology

In order to verify the applicability of the PDI at the IFSULDEMINAS it was made an analysis of documents and it was conducted a survey including the deans of the institution. The documentary analysis showed that the PDI complies with all legal requirements as to the preparation process and the proposed objectives are compatible to the mission.

The chosen methodology was a case study, a methodology used in the analysis of contemporary events, interviews and observations.

We did analysis in order to verify the importance of the PDI for the institution and to understand if it represents a strategic planning tool.

The survey included the Provost and five Deans of the IFSULDEMINAS. The issues addressed in the questionnaire aimed to determine the recognition of the PDI as strategic planning methodology, how it works and who should be responsible for its elaboration, if it is just a report or a strategic planning methodology, if there is an analysis of the past in this plan, whether it is democratic or centralized, if it generates commitment and if each department has a specific plan.

4 - Results

The questions were analyzed in order to ascertain the applicability of PDI and what it represents for the current management of the IFSULDEMINAS. It was attempted to verify how well this plan was developed and can compared to a strategic plan methodology.

Respondents stated that the PDI should be built in a participatory and democratic, involving all levels of the IES and the community, in spite of adopting these actions as political action and not as a division of responsibility and knowledge exchange. They also point to the existence of the four stages of Oliveira (2013) in the preparation of this PDI process. However, recognize the plan as static and reevaluation of plans due to new government claims that arose after the completion of the IDP.

Through the responses obtained, it can be stated that the PDI is seen as a mere report by the majority of academic technical community, perhaps for lack of physical structure and staff in the Institute. It was observed that the PDI was restricted to the decision making level despite being a public document.

However, respondents recognize that involvement generates commitment and power sharing. Thus, the democratization of the PDI is essential for its implementation.

The interviewed managers recognize the importance of the current IDP but find that the instrument needs to be more specific in its requirements and proposed actions. Some of them believe the PDI was done more to report than to guide actions and that it was built without much precision. The institution was very new and the PDI was prepared without full knowledge of the institution. As a result, today the PDI does not represent the reality of IFSULDEMINAS. These results show the importance of reevaluation of proposed actions and correction of faults

to continue directing the IES. The responses of managers show that PDI, in addition to long-term planning, actions must exist in the short term, "with course corrections, due to new found realities". Another respondent adds: "I think as a manager that the PDI is an institutional planning in strategic and tactical terms because it addresses the institutional horizons in the medium and long term, detailing human, financial and structural resources."

There was no consensus on the answers given by managers on the existence of specific plans for each area. None of the responses concluded that each area is structured and planned to meet the proposed objectives.

It was possible to verify that the PDI is a director of the guidelines and goals driven by government plans that aim to meet the socioeconomic and cultural needs of the regional population. However, from the interviews it was possible to observe that the actions, plans, guidelines and specific goals do not analyze the changes that the environments suffer, much less adapt to them.

It could be observed that the PDI was not adapted to environmental changes and soon became outdated and underutilized.

In conclusion, at the IFSULDEMINAS the PDI is not yet being used as a strategic planning although managers value it as an administrative tool. Some limitations of this study include that it was not to monitor all stages of development. Also the fact that its use could be checked only on the point of view of managers and not in the institution as a whole. Still, it is possible to verify the importance to be given to the Plan of Institutional Developments in the management of the Institution of Higher Education.

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INTE 2014

COMPARISON OF BOOKS THAT ARE TAUGHT IN NORTH CYPRUS AND SOUTH CYPRUS SCHOOLS IN A REALISTIC PERSPECTIVE

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ABSTRACT

In the context of this research, there have been comparisons between books, particularly historical books that are being taught schools of North Cyprus and South Cyprus according to historical reality perspective. For this purpose, two different historical subjects from two different administrative bodies have been analyzed in the light of European Council's 21st Century's Europe recommendation principles about history education. For that, textbooks that are used in North Cyprus and South Cyprus had been scanned, literature screening is done, and interviews had been organized. As a result of the study, it is put forward that North Cyprus history textbooks were changed according to European Council's decisions, whereas South Cyprus didn't make any changes.

1. INTRODUCTION:

According to Beşiktepe (2002) in communities, history has an important role in teaching or making people gain moral measures. All the people, classes, nations, communities who worry about the future cannot forgo the past. The past is the only treasure for determining future. For this reason, claiming the cultural heritage is getting into an ideological attitude. Because the cultural heritage is gained with a certain process of learning and comprehension, protecting cultural heritage means a renewal of consciousness. This worry about future and historical knowledge is bonded siblings. Future worry requires gaining historical knowledge. Historical knowledge makes future worry to get in shape in thoughts. It is obvious that history doesn't mean "remembering past", conversely history consciousness shows future to people. When it is said protecting cultural heritage, primarily it is not only the necessity of democracy, only to oppose the pressures on the folks lived or living these lands, but it is a necessity of people to protect their future.

According to Metin(2006) all countries that have a place in modern world see creation of modern history education as a primary mission which is suitable for its own philosophy of existence. A national history education which reserves a role to nation's history and aims to grow individuals suitable for national needs and it empowers the love and link to national measures develops feeling of satisfaction and appreciation to national wealth and making sense of principles and reforms is the primary objective of the modern countries. There are two types of arguments which are based on the objectives of history education. First argument describes the objective of history as creating citizenship consciousness and creating nations (Beşiktepe, 2002; Metin, 2006).

2. METHODOLOGY

Literature review is the first tool of this study. In second phase of the study, with half configured interview techniques, some data had been collected. In this third and final phase of the study, necessary had been collected through configured interview techniques.

First of all, the textbooks in North Cyprus and South Cyprus were investigated for a month. After that, to reflect the community of the *North Cyprus*, half configured interview techniques were applied on students aged between 12-17 for 15 days. Two schools were chosen randomly in each city of TRNC. After that, 120 students were chosen randomly from different classes in order to make an interview which took place in classes for 10 minutes. In the final phase, with 10 senior administrators, 11 teachers from teachers' union, 3 administrators from ministry of education and 10 parents of students have been interviewed face to face.

3. FINDINGS:

3.1 The analyses of textbooks in South Cyprus between the years of 2010-2011

In modern Greek literature History textbook which is taught in secondary school, literary books which aims encouraging people to rebel against Ottoman Empire begins from 1821 Greek revolt preparation period, continues with the Conquest of Istanbul and then the capture of Crete till Greek revolt. Similarly, In the book called History of Modern and Contemporary Age which is secondary school third class book, Greek invasion of İzmir and their deployment in Anatolia are explained under the heading of "War of Little Asia". The book claims that Greek immigrated to these lands because Ottomans kicked them out multifarious times. Afterwards, the independence war, salvation of İzmir and the state of Pontus are explained with Greek thesis. In Cyprus history book of secondary first class, the reflections of those developments to Cyprus are explained and the bad behaviour of Ottoman administration to the Greeks in Cyprus which happened after 1821 Greek revolt is mentioned. During the British domination, the emergence of EOKA and its activities, EOKA militants which had been hanged by British Administration and Peace Invasion, "immigrants", barbwires and the lost people were pointed out with explanations and pictures. In most of the books, there are comments which insult Turkish and Turkish Cypriots and imbue grudge and hatred. In the context of literary text, there are poems and plain texts which include grudge and hatred emotions against Turks in the books named; Cyprus Literature Anthology (for secondary and high school), Modern Greek Literature Texts first part, Cyprus Literature Anthology second part. In the books of Cyprus Church-Witness and Life and Expression – Composition second part, there are similar explanations which insult and feed unfriendly emotions against Turks. In the book of Expression-Composition, expressions reach instigate antagonism against Turks are found with pictures of barbwires, tanks and daggers place on Cyprus.

It is found that there is Hellenism propagate when evaluated under the light of reality. For example, in the textbook of Social Education, it is mentioned that there had been inter communal unclearness between Turkish Cypriots and Greeks and it is claimed that Turkish Cypriots withdrew from

Republic of Cyprus' mechanisms. When "UN and Problem of Cyprus" is handled, these explanations take place:

"After the independence campaign of Cyprus Helens that was set up by EOKA, independent republic of Cyprus was declared in 1960.(1st October 1960)

The textbook of the of the 8th class of the secondary school indoctrinate "Cypriot" identity to the students and Greek Cypriot and Turkish Cypriots are presented as communities of the Cypriot people during classes. In new textbook, it has been emphasized that Greek Cypriots and Turkish Cypriots as separate nations of the island. In the old version "United Kingdom" has been shown as rightful owner of the island before the declaration of independence and establi

Interview Results:

About the changes made in North Cyprus 2004 TRNC Ministry of Education and Culture mentioned that, they brought a configurative understanding to education which is applied in modern world. They release hostility emotions and idioms from he history books and they are proud of doing it. They also expect the same attitude from South Cyprus(interview). The administrators of North Cyprus ministry of education culture mentioned that the main point that needs to be worked on is a solution based on politic equality. In 2006 North Cyprus president Talat wrote a letter to UN previews general secretary Annan saying ` Cyprus Turkish side had some concrete steps about education which were done to contribute to form a trust between the two communities on the island, and started one sided project under control of TRNC Ministry of Education and culture, which aims rewriting of the history text books to remove the hostility and hatred between the two communities.` However Talat pointed out that when the level of nationalist text about Cyprus Turks found in the history lesson books of Greeks are taken into account, it is disturbing and discouraging that they don't make any attempts about this topic.

On the other hand the reforms that are carried out is commented by different zones of population in different figures. for example Cyprus Turkish union of teachers has similar ideas with the reforms made. Union of teachers' general secretary Sener Elcil mentioned that the education should be student centred. Elcil emphasizes that `the type of student they want to see is individuals who will adopt global measures and he states that an understanding, continuing with logic of not having these measures, only a good citizen, a citizen respectful to government can not take the country in to a good position. Elcil also added that Union of teachers foresees an education settlement which will grow individuals in that mentality. These statement of Sener Elcil in the name of Union of teachers are the same as the main idea of 2004 education reform.

However Union of teachers says that carrying out reforms is impossible and consists of buncombes. According to Union of teachers the reasons of impossibility are finance, the constitution of population and the problem of Cyprus. As the primary government schools get a very small amount of money (4%) from the government budget, it was specified that without enough budget, there is no possibility to carry out reforms. In addition, as the population of TRNC is not known exactly, it is not possible to set up an education plan. All these problems and reform applications will not be handled and applied before the problem of Cyprus will be solved.

1. Result and Discussion

If Greek Cypriot textbooks would be investigated in light of the findings mentioned above, it could be said that they were written using and deriving the history of Greece as a model. In all the books, the purpose is to suggest that the history of Cyprus has only been made up of Hellenic history; and that Cyprus has belonged to Greeks and always will be.

Another point is the fact that all books use the word 'Cypriots' frequently to define the people living in Cyprus; however the word 'Cypriot' is used as a synonym of 'Greeks' (Ellines) (Kizilyurek 2005, Papadakis 2009). The aim of this implementation here is to infuse into historical awareness of Greek Cypriots and suggest that there is no other native group of people living in Cyprus apart from Greeks or at least any other group of people living on the island has only been battenning on. Papadakis (2008) explains this situation with his 'thesis of Hellenizing'. According to this thesis, although several populations had lived in Cyprus, natives have protected the Hellenic properties of the island. This model of idea rejects the presence of the others (Turkish Cypriots) therefore uses the category of 'Cypriots' excluding them (Papadakis, 2008).

In 2004 the decision of changing the Cyprus history text books were applauded and this decision started a huge discussion in the north of the island. When the books were published 5 years ago, parties, journalists and historians fiercely resisted against the changes. If it is set out with the opinion that history education is a tool in 'Creating National Identity', it is not surprising for the changed history books to take an important place in media and the public agenda. Vehbi Zeki Serter's History of Cyprus book was the only history book to be taught in the schools for nearly 30 years. There can be a lot of reasons to change the books used in history education and generally the history education, but we can say that the main reason is about ideology.

The books of 2004 period which can be seen as a step in any type of communication with 'European Union' and 'Greek Cypriots', defends the mutual respects of two communities by fastening on Cypriot identity and social history. Changing the history text books can be seen as an effort towards speaking the same language which is an important part of reconciliation as Derrida defends. Leading philosophers such as Yiannis Papadakis identified the 2004 lesson books as academic, ideological and 'change of approach' from the point of politics despite the books general weak points. Similarly, Yucel Vural and Evrim Ozyanik described these books as a new historical comment which put forward 'Cypriot Turk Identity' instead of 'Turkish Identity', 'Uniting' instead of 'separation' and 'cooperation' instead of 'rivalry'.

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Comparision of strenght speed and endurance in 11-13 age boys and girls

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Abstract

The aim of this study was to evaluate the differences among strength, speed and endurance in 11-13 age girls and boys and development of these biomotor abilities according to age. Totally 305 children have joined this study. Height, weight, standing broad jump, 20 m. Sprint run, 15 s crunch test, 10 s. Push-up test, 20m. Shuttle Run tests (Eurofit Tests batteries) have been measured. The differences obtained from the test results between girls and boys who joined the study have been analysed. In both groups at age of 11 and 13 significant differences were found between all parameters ($p<0,05$). Between weight and standing broad jump, 15 s crunch test significant differences were found on children at age of 12.

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Peer-review under responsibility of the Sakarya University.

Keywords: Children; Strength; Speed; Endurance

1. Introduction

Despite the continuous deceleration experienced in the child growth during the first years of primary school education, secondary gender characteristics and an instant increase in body height are observed to emerge in girls due to the changes in the physical biochemicals at around the age of ten. While boys have taller and bigger bodies than girls until the age of ten, they appear to look smaller than girls around the final years of the primary school education.

However, they are more active than girls and they prefer activities that require physical strength more than girls do. Motor skills are observed to improve in both genders more than they improve in the preschool period. Primary school children can easily run and climb. Skills such as roller skating and biking could easily be attained during this period. Physical growth and improvement that relatively decelerates during childhood, accelerates during adolescence and reaches its final structure for adulthood following this period (Erden and Akman, 1995).

In the event that a healthy child is deprived of physical activities and is restrained from sufficient activity, his/her psychomotor development would be damaged and his/her performance at school would decrease accordingly. A study that was conducted in France reveals one of the most significant examples on this issue. In the study that was conducted in Vanve near Paris, students enrolled in the baccalaureate program were divided into two groups and the number of hours allocated to theoretical courses was decreased for one group while the

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existing schedule was sustained in the other group. The number of hours allocated to physical education and sports was increased in the group, whose number of hours allocated to theoretical courses was decreased and the students performed sports activities in various fields of sports. According to the evaluations made at the end of the year, it was observed that while the achievement rate in the group that followed the existing schedule was 60%, the achievement rate of the group with increased sports hours increased to 89% (Cited by Kalyon, 1994). It is not possible to interpret the relationship between sports and achievement completely; however, the following opinion is hypothesized:

Those who begin to adapt physical performance to a certain type of sport at a young age and those who have extraordinary skills could reach the highest level of athletic performance. Athletic skills should be identified as early as possible and they should be improved thereafter. Precise and reliable values of physical competence would guide educators and politicians about the measures to be taken in this field (Açıkada and Ergen, 1990).

Physical competence has two dimensions: health and performance. While the performance dimension referred to the topics such as strength and speed, the health dimension covers endurance and body composition (Demirel et al., 1990).

Muscle power increases as the children grow. During adolescence, there are certain increases in the muscle strength. In the fields of sports that depend on muscle strength and speed, improvement occurs slowly as age level increases. Therefore, putting too much pressure on children in the early years for achievement purposes could have negative effects on their physical development (Kalyon, 1994).

This study aimed to analyze whether there were any differences in girls and boys aged between 11 and 13, in terms of explosive power, speed, and endurance, as well as the changes experienced according to their age levels.

2. Method

2.1. Subjects

The sampling of the study was composed of 305 students: 50 boys and 53 girls at the age of 11; 45 boys and 35 girls at the age of 12; and 62 boys and 60 girls at the age of 13. The height and body weights of the participants are listed in Table 1, together with their means and standard deviations

Table 1. Means and standart deviations of height and weight of study group.

		BOYS		GIRLS		
Age Group	n	Height (cm)	Weight (kg)	n	Height (cm)	Weight (kg)
11	50	145,01±5,4	39.7±6,2	53	149.01±6,2	38.05±5,03
12	45	150±7.1	41.9±9,02	35	152±8,7	39.6±6,5
13	62	157±8.5	45.5/±8,0	60	154.3±5,2	42.9±6,7

The sampling of the study was enrolled in the physical education courses according to the curriculum identified by the Ministry of National Education. Students who were certified athletes and were unable to perform sports due to certain reasons (post operation period, etc...), as well as those who were not able to participate in physical education classes due to a medical report were not included in the sampling.

.2. Data Collection

The sampling was measured in terms of their height, weight, standing long jump, 20 second sprints, 15 second sit-up, 10 second push-up, and 20 meter progressive shuttle run values under the supervision of experienced assessors. All participants were measured in the indoor sports hall with synthetic turf floor without warming up. The endurance run and other assessments were executed on different days.

Height was measured with a "Sigma" branded tool with a mechanic height display (60cm - 200cm). The heights of the participants were measured barefoot with touching heels, in an upright standing position and after having taken a deep breath. The measurement was made twice, consecutively, and the best value was recorded.

Body weights were measured with a "Sigma" branded scale that measured the weight between 0 and 100 kilograms with a +500gr sensitivity, while the subjects were dressed in shorts and t-shirts. The participant was asked to look ahead while standing on the scale. The value identified was recorded.

For the standing long jump, the participant was asked to stand on a line 5 centimeters wide with the tip of his/her shoes on the line. The participant was asked to bend his/her knees and jump forward from this position. The participant was allowed to gain speed using his/her arms. In situations such as taking steps or line abuse, the jump was deemed invalid and the participant was asked to repeat. Those who failed twice were asked to perform the third assessment after the test was completed. The measured value was the distance between the jumping line and the point where the heels of the participant was located. In order to identify the jumping point where the heel was located, all shoe heels of the participants were marked with chalk.

The 20 meter sprint was performed within a 20 meters of distance was performed within a 20 meter distance marked with a strip and cones on the sides. While the observer with the chronometer stood at the finish point, another observer identified line abuse at the starting point. The run started with the "Ready... GO" command of the observer with the chronometer. The observer with the chronometer stood at the end of the strip, which was located at the finish point and stopped the chronometer when the participant passed the line. In the event of a false start, the test was repeated. For the participants who failed twice, the measurement was performed after the tests.

For the 15-second sit-up, the participant was asked to lie on the mat with his/her foot touching the floor, his/her knees bent 90 degrees, holding the hands behind the head touching each other. Participants' feet were held by an observer and the observer counted the sit-ups out loud. Starting position was when the back was angled 90 degrees to the floor. The observer holding the chronometer commanded, "Ready... Start" while turning on the chronometer at the same time and the participant began the sit-ups with the command. The measurement was completed when the participant stopped upon the "OK" command of the observer, indicating that the 15-second period was over. The value identified by the observer was recorded.

The 10 second push-up was performed by the participants lying down with the arms open at shoulder width, fingers and palms touching the ground facing forward. The starting position was when the participant was lying flat on the floor with his arms bent from the elbow joints, and the first push-up was counted when the chest touched the ground. The measurement began when the observer turned on the chronometer with the command, "Ready... Start" and the participant performed the push-up until the observer commanded "OK". The value mentioned by the other observer was recorded.

Progressive shuttle run was performed on a marked track of 20 meters and the participants ran along the track continuously. The rhythm of the run was synced with a signal broadcasted by a tape-recorder. The participant was allowed to approach the finish line within 2 meters and when s/he was 2 meters from the finish line, a warning was given. The test was finalized when the second warning was given. In the event that a participant was able to sync with the second signal while she had received one warning, the warning was erased. Participants, who did not receive any warnings, continued the test until they were sore. Five tracks were allocated for the test and two observers were located at the beginning and end of each track (Renson, 1993). The final appropriate value obtained by the participant was recorded.

3. Data Analysis

The differences between the test scores obtained by the participating girls and boys were analyzed in the SPSS 12.0 software through the t-test for independent groups. The differences between the age groups were observed through the single-dimensional ANOVA and Tukey tests.

3. Results

The values obtained from the participant girls and boys aged 11, 12, and 13 for their height, body weight, standing long jump, 20 meter sprint, 15 second sit-up, 10 second push-up and progressive shuttle run are given in Table 2, along with the arithmetic mean and standard deviations.

Table 2. Means, Standard Deviations and t-test values of variables of boys and girls in age groups

	11 age			12 age			13 age		
	BOYS	GIRLS	t-test	BOYS	GIRLS	t-test	BOYS	GIRLS	t-test
n	50	53		45	35		62	60	
Height (cm)	145±5,4	149±6,25	0.002*	150±7,1	152±8,7	0.499	157±8,05	154,3±5,29	0.026*
Weight (kg)	39,7±6,2	38,05±5,03	0.033*	41,9±9,02	39,6±6,5	0.156	45,5±8	42,9±6,71	0.059
Standing Long Jump (cm)	134,3±16,8	118,6±17,6	0.000*	144,9±33,5	132,5±19,89	0.078	155,9±20,5	137,4±15,73	0.000*
20 m Sprint (sn)	4,36±0,36	4,06±0,34	0.001*	4,48±0,45	4,87±0,41	0.000*	4,05±0,3	4,43±0,35	0.000*
15 s Crunch (rpt)	11,7±1,93	10,11±1,66	0.000*	10,76±2,36	10,03±2,21	0.239	12,59±2,14	10,5±2,36	0.000*
10 s Push up (rpt)	9,56±1,96	8,38±2,68	0.014*	6,23±2,88	4,75±2,33	0.008*	8,11±2,84	6,75±2,78	0.008*
Shuttle Run (tour)	29,24±11,02	24,4±8,88	0.018*	30,45±13,22	25,6±9,22	0.036*	43,31±16,96	28,46±11,43	0.000*

(*p<0.05)

According to the table, statistically significant differences were found between 11 age boys and girls in whole variables, on the other hand there were only statistical differences in 20m. sprint, 10 s. Push up and Shuttle run in 12 age boys and girls. While statistically significant differences were found between the 13-year-old boys and girls in terms of height, standing long jump, 20 meter sprint, 15 second sit-up, 10 second push-up, and progressive shuttle run ($p<0.05$), no statistically significant difference was found between their body weight values.

When same parameters evaluated in terms of gender, it was observed that there was a linear increase in the body weights and heights of the boys and girls parallel to the increase in their ages.

In terms of height, statistically significant differences were observed for the boys at all ages ($p<0.05$). A statistically significant difference was observed for the girls in the 12-13 age group and the 11-13 age group, excluding those in the 12-13 age group ($p<0.05$).

In terms of the body weight, while there was a statistically significant difference in boys aged 11 and 12, there was no statistically significant difference between boys aged 12 and 13. Statistically significant differences were observed in the girls in the 11-13 age group and 12-13 age group ($p<0.05$).

As the indicator of explosive power, standing long jump values increased linearly in both genders according to age. The 20 meter sprint values, which were the indicators of speed skills decreased at the age of 12 for both genders.

With respect to the standing long jump, no significant difference was observed in the average scores of boys in the 11-12 age group, as well as those in the 12-13 age group; however, a statistically significant difference was found among the boys aged between 11 and 13 ($p<0.05$). According to the 20 meter sprint, while no significant difference was found in the 11-12 age group, significant differences were found in the 11-13 age group and 12-13 age group ($p<0.05$). The standing long jump values that were identified for girls resulted in no statistically

significant difference, excluding those in the 12-13 age group. The 20 meter sprint values indicated a statistically significant difference for all age groups ($p < 0.05$).

The 15 second sit-up values (muscular endurance in the stomach area) did not display any linear increase for both genders (Graph 3a). The 10 second push-up values (muscular endurance in the shoulder area) decreased towards the age of 12 and increased after that age.

With respect to the 15 minutes sit-up values, a statistically significant difference was observed for boys in the 12- 13 age group ($p < 0.05$). The 10 seconds push-up values concluded that there was a statistically significant difference at all age levels ($p < 0.05$). While no significant difference was observed among girls with respect to the 15 second sit-up values, the average scores obtained from the 10 second push-up indicated a statistically significant difference in all age groups ($p < 0.05$).

The progressive shuttle run (respiratory endurance) displayed a linear increase for both genders; however, there was a significant increase in boys when compared to the girls starting from the age of 12.

According to the average progressive shuttle run averages, a statistically significant difference was observed among the boys between the 11 - 13 and 12 - 13 age groups ($p < 0.05$); however, there was no significant difference among the girls regarding this variable.

4. Discussion

Physical activity has invaluable effects on health, physical competence, as well as normal growth and development. A lack of exercise and extreme physical activity could be harmful within the growth and development process. Normal physical maturation represents the sequence of events experienced by all individuals, respectively. However, the starting points and formation speeds could vary. It is quite difficult to distinguish between the effects of regular physical activity on physical maturity as well as growth and maturation (Hills A., 1995).

While the period between the age of 11 and 13 referred to the transition period to the adolescence for girls in the sampling from school age, it referred to the school age for boys. Girls experience adolescence in the 11 - 13 age group, while the boys experience adolescence in the 13 - 15 age group (Muratlı, 1992; Bağırgan, 1992; Erden and Akman, 1995; Zaichkowsky, 1980).

The deceleration in growth that starts in the preschool period continues until the ages of 10 and 11. Despite the continuous deceleration experienced in the child growth during the first years of primary school education, an instantaneous increase in body height is observed to emerge in girls due to the changes in the physical biochemicals around the age of ten. Although they appear smaller compared to girls, boys are more active (Erden and Akman, 1995). This information is in line with the conclusions of this study. The study concluded that 11-year-old girls were taller than the boys ($p < 0.05$), that boys grew taller more quickly after the age of 12, and that at the age of 13 boys were taller than the girls ($p < 0.05$).

In terms of height, 11-year-old boys were shorter than the girls; however they had higher values with respect to their body weights ($p < 0.05$). No significant difference was found between girls and boys at the age of 12. In the 13-year-old age group, weight also increased in boys along with height; however, no significant difference was observed. Mechelen (1991) found that the height and body weights of girls in the 12 - 13 year-old age group were higher than those of the boys. In the crosscut study conducted with adolescent boys and girls in the 11 -17 age group from Estonia and Lithuania, the changes in Eurofit performance were determined. In terms of body weight and gender, no significant difference was observed between the children of Lithuania and Estonia, who belonged to the 11 -13 age group; however, a significant difference was observed in Lithuanian and Estonian boys in terms of height (Jūrimāe et al., 2007).

The linear increase in height, body weight, explosive power, and endurance values according to age is closely related to maturation. These parameters improve in a child within his/her daily life and game process without the need for a special study. However, speed requires special interest and genetic structure. It is easier to increase the speed for a child with a fast muscular genetic structure that belongs to the Type 2 tendons.

In his study, Keogh (1973) proved that the standing long jump values improved in the same manner in girls and boys until the age of 13, and the improvement accelerated in boys after the age of 13, while it remained the

same for girls. The values covering the period between the ages of 11 and 13 are in line with the findings of this study. Muratlı (1992) suggested, "with respect to strength, boys reach the greatest strength improvement speed at the ages of 13 and 15. They have the lowest strength values at the age of 11; however, the girls at the same age have higher values". In both the current study and the study by Keogh, the standing long jump values were found to improve together until the age of 13 and girls were found not to have the same values as boys at the age of 11; on the contrary, boys were determined to have higher values. In this study, a statistically significant difference was found between the 11-year-old girls and boys with respect to the standing long jump values and the boys were observed to be able to jump further than the girls. Accordingly, the higher body weight averages determined in boys of this age group when compared to the girls indicates that the muscle bulk was larger in the boys. Standing vertical jump differences did not display a statistical significance in the 12-year-old age group; however, the difference was significant at the age of 13. In their study from 2007, Jürimäe et al. found that the standing long jump values in 11-year-old boys were 166.5 ± 20.6 cm, and those values in girls were 157.5 ± 20.2 cm. Standing long jump values in 12-year-old boys were 174.6 ± 17.8 cm and they were 161.4 ± 20.6 cm in girls. The same value was 182.4 ± 22.1 cm in 13-year-old boys and 169.6 ± 20.6 cm for girls.

Mechelen (1991) found that the height and body weights of girls in the 12 - 13 age group were higher than those of the boys. The endemic endurance in stomach muscles was found to be better in boys when compared to the girls due to the intense participation of boys in athletic activities outside the school when compared to the girls.

Boys at the age of 13 began to obtain better values than the girls of the same age group. Age 13 is the beginning of the adolescence period for boys. Starting with this age, boys experience improvement in maximum power, coordination, and gender characteristics.

According to the 20 meter sprint run, 11-year-old girls obtained better values than the boys ($p < 0.05$), while in the 12-13 age group the values of boys were lower than the girls with a statistically significant difference. In their study, Sağlam et al. (2002) aimed to determine the physical competence and nutrition status of 127 students (68 boys, 59 girls) with the age average of 11.26 ± 1.10 years. No statistically significant difference was found between the children who participated in sports and those that did not, excluding the variables of leg power. The 20 meter sprint values were 4.0 ± 0.3 sec for the children who did not participate in sports, while the value was found to be 4.1 ± 0 sec for those who participated in sports activities. This shows that the values are close to the values obtained by the boys in this study; however, the difference was greater for the girls.

The development of body and arm muscles is known to improve the increasing athletic performance and protect the muscular skeleton system (Allen et al., 2013). The average scores obtained from the 15 second sit-up favored the boys in all age groups; however, the difference was statistically significant in only the 11 and 13 age groups. Additionally, the average repeated push-up scores obtained by the girls and boys in all age groups also favored the boys ($p < 0.05$). Furthermore, an increasing curve was not observed due to the increasing age level. In their study, Jürimäe et al., determined the 30 second sit-up values in Estonian boys as 22.9 ± 3.5 sit-ups, and in girls as 21.1 ± 4.1 sit-ups. Twelve-year-old boys were found to perform 23.7 ± 4.4 sit-ups and the girls were found to perform 21.2 ± 3.8 sit-ups. The value determined for the 13-year-old boys was 24.5 ± 3.7 sit-ups, and this was found to be 21.6 ± 3.3 for the girls.

According to the study by Sağlam et al. (2002), the number of 20 seconds push-ups was found to be 37.5 ± 11.3 in children who did not participate in sports, while the value was found to be 42.1 ± 14.5 in children who participated in athletic activities. The standing long jump values for the same group were found to be 135.4 ± 22.3 cm for the group who participated in sports activities and 129.2 ± 16.5 cm for the group who did not.

The 20 meter progressive shuttle run values were found to be higher in boys in all three age groups and this difference was observed to be statistically significant at all age groups ($p < 0.05$). In their study, Saygın et al. (2007) aimed to determine the effects of the movement training for 16 weeks on the physical competence parameters of the boys aged between 10 and 12, and they observed a significant difference in the treatment group while no significant difference was found in the control group. When the proportion of the heart volumes of a child and an adult to their body weights are compared, no significant difference was observed. Children and teenagers have a disadvantage, in terms of their oxygen reserves. Until the ages of 14 and 15, the amount of the blood component that transfers oxygen (hemoglobin) is lower than in adults. Even untrained children have quite

high capacities of oxygen usage. However, they are not able to use this capacity effectively (Açıkada and Ergen, 1990).

5. Conclusion and recommendations

The aim of the sports courses in the curriculum is health education, movement education, game education, free-time education, and performance education (Cited by Kuruç and Bayar, 1992). Physical education courses in Turkey are implemented according to the curriculum mandated by the Ministry of National Education. Paying special attention to the quality and importance of the physical education course content in such a manner as to improve the health and physical development of the children who do not actively participate in sports would ensure the academic achievement of healthy and fit individuals in the future.

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Comparison of books that are taught in North Cyprus and South Cyprus schools in a realistic perspective

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Abstract

In the context of this research, there have been comparisons between books, particularly historical books that are being thought schools of North Cyprus and South Cyprus according to historical reality perspective. For this purpose, two different historical subjects from two different administrative bodies have been analyzed in the light of European Council's 21st Century's Europe recommendation principles about history education. For that, textbooks that are used in North Cyprus and South Cyprus had been scanned, literature screening is done, and interviews had been organized. As a result of the study, it is put forward that North Cyprus history textbooks were changed according to European Council's decisions, whereas South Cyprus didn't make any changes.

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Peer-review under responsibility of the Sakarya University.

Keywords: North Cyprus; South Cyprus; Comparison; Perspective; Taught

Introduction

According to Beşiktepe (2002) in communities, history has an important role in teaching or making people gain moral measures. All the people, classes, nations, communities who worry about the future cannot forgo the past. The past is the only treasure for determining future. For this reason, claiming the cultural heritage is getting into an ideological attitude. Because the cultural heritage is gained with a certain process of learning and comprehension, protecting cultural heritage means a renewal of consciousness. This worry about future and historical knowledge is bonded siblings. Future worry requires gaining historical knowledge. Historical knowledge makes future worry to get in shape in thoughts. It is obvious that history doesn't mean "remembering past", conversely history consciousness shows future to people. When it is said protecting cultural heritage, primarily it is not only the necessity of democracy, only to oppose the pressures on the folks lived or living these lands, but it is a necessity of people to protect their future.

According to Metin(2006) all countries that have a place in modern world see creation of modern history education as a primary mission which is suitable for its own philosophy of existence. A national history education which reserves a role to nation's history and aims to grow individuals suitable for national needs and it empowers the love and link to national measures develops feeling of satisfaction and appreciation to national wealth and making sense of principles and reforms is the primary objective of the modern countries. There are two types of arguments which are based on the objectives of history education. First argument describes the objective of history as creating citizenship consciousness and creating nations (Beşiktepe, 2002; Metin, 2006).

2. Methodology

Literature review is the first tool of this study. In second phase of the study, with half configured

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interview techniques, some data had been collected. In this third and final phase of the study, necessary had been collected through configured interview techniques.

First of all, the textbooks in North Cyprus and South Cyprus were investigated for a month. After that, to reflect the community of the *North Cyprus*, half configured interview techniques were applied on students aged between 12-17 for 15 days. Two schools were chosen randomly in each city of TRNC. After that, 120 students were chosen randomly from different classes in order to make an interview which took place in classes for 10 minutes. In the final phase, with 10 senior administrators, 11 teachers from teachers' union, 3 administrators from ministry of education and 10 parents of students have been interviewed face to face.

3. Findings

3.1. *The analyses of textbooks in South Cyprus between the years of 2010-2011*

In modern Greek literature History textbook which is taught in secondary school, literary books which aims encouraging people to rebel against Ottoman Empire begins from 1821 Greek revolt preparation period, continues with the Conquest of Istanbul and then the capture of Crete till Greek revolt. Similarly, In the book called History of Modern and Contemporary Age which is secondary school third class book, Greek invasion of İzmir and their deployment in Anatolia are explained under the heading of "War of Little Asia". The book claims that Greek immigrated to these lands because Ottomans kicked them out multifarious times. Afterwards, the independence war, salvation of İzmir and the state of Pontus are explained with Greek thesis. In Cyprus history book of secondary first class, the reflections of those developments to Cyprus are explained and the bad behaviour of Ottoman administration to the Greeks in Cyprus which happened after 1821 Greek revolt is mentioned. During the British domination, the emergence of EOKA and its activities, EOKA militants which had been hanged by British Administration and Peace Invasion, "immigrants", barbwires and the lost people were pointed out with explanations and pictures. In most of the books, there are comments which insult Turkish and Turkish Cypriots and imbue grudge and hatred. In the context of literary text, there are poems and plain texts which include grudge and hatred emotions against Turks in the books named; Cyprus Literature Anthology (for secondary and high school), Modern Greek Literature Texts first part, Cyprus Literature Anthology second part. In the books of Cyprus Church-Witness and Life and Expression – Composition second part, there are similar explanations which insult and feed unfriendly emotions against Turks. In the book of Expression-Composition, expressions reach instigate antagonism against Turks are found with pictures of barbwires, tanks and daggers place on Cyprus.

It is found that there is Hellenism propagate when evaluated under the light of reality. For example, in the textbook of Social Education, it is mentioned that there had been inter communal unclearness between Turkish Cypriots and Greeks and it is claimed that Turkish Cypriots withdrew from Republic of Cyprus' mechanisms. When "UN and Problem of Cyprus" is handled, these explanations take place:

"After the independence campaign of Cyprus Helens that was set up by EOKA, independent republic of Cyprus was declared in 1960.(1st October 1960)

The textbook of the of the 8th class of the secondary school indoctrinate "Cypriot" identity to the students and Greek Cypriot and Turkish Cypriots are presented as communities of the Cypriot people during classes. In new textbook, it has been emphasized that Greek Cypriots and Turkish Cypriots as separate nations of the island. In the old version "United Kingdom" has been shown as rightful owner of the island before the declaration of independence and establish.

3.2. *Interview Results:*

About the changes made in North Cyprus 2004 TRNC Ministry of Education and Culture mentioned that, they brought a configurative understanding to education which is applied in modern world. They release hostility emotions and idioms from he history books and they are proud of doing it. They also expect the same attitude from South Cyprus(interview). The administrators of North Cyprus ministry of education culture mentioned that the main point that needs to be worked on is a solution based on politic equality. In 2006 North Cyprus president Talat wrote a letter to UN previews general secretary Annan saying ' Cyprus Turkish side had some concrete steps about education which were done to contribute to form a trust between the two communities on the island, and started one sided project under control of TRNC Ministry of Education and culture, which aims rewriting of the history text books to remove the hostility and hatred between the two communities.' However Talat pointed out that when the level of nationalist text about Cyprus Turks found in the history lesson books of

Greeks are taken into account, it is disturbing and discouraging that they don't make any attempts about this topic.

On the other hand the reforms that are carried out is commented by different zones of population in different figures. for example Cyprus Turkish union of teachers has similar ideas with the reforms made. Union of teachers' general secretary Sener Elcil mentioned that the education should be student centred. Elcil emphasizes that 'the type of student they want to see is individuals who will adopt global measures and he states that an understanding, continuing with logic of not having these measures, only a good citizen, a citizen respectful to government can not take the country in to a good position. Elcil also added that Union of teachers foresees an education settlement which will grow individuals in that mentality. These statement of Sener Elcil in the name of Union of teachers are the same as the main idea of 2004 education reform.

However Union of teachers says that carrying out reforms is impossible and consists of buncombes. According to Union of teachers the reasons of impossibility are finance, the constitution of population and the problem of Cyprus. As the primary government schools get a very small amount of money (4%) from the government budget, it was specified that without enough budget, there is no possibility to carry out reforms. In addition, as the population of TRNC is not known exactly, it is not possible to set up an education plan. All these problems and reform applications will not be handled and applied before the problem of Cyprus will be solved.

4. Result and Discussion

If Greek Cypriot textbooks would be investigated in light of the findings mentioned above, it could be said that they were written using and deriving the history of Greece as a model. In all the books, the purpose is to suggest that the history of Cyprus has only been made up of Hellenic history; and that Cyprus has belonged to Greeks and always will be.

Another point is the fact that all books use the word 'Cypriots' frequently to define the people living in Cyprus; however the word 'Cypriot' is used as a synonym of 'Greeks' (Ellines) (Kizilyurek 2005, Papadakis 2009). The aim of this implementation here is to infuse into historical awareness of Greek Cypriots and suggest that there is no other native group of people living in Cyprus apart from Greeks or at least any other group of people living on the island has only been battenning on. Papadakis (2008) explains this situation with his 'thesis of Hellenizing'. According to this thesis, although several populations had lived in Cyprus, natives have protected the Hellenic properties of the island. This model of idea rejects the presence of the others (Turkish Cypriots) therefore uses the category of 'Cypriots' excluding them (Papadakis, 2008).

In 2004 the decision of changing the Cyprus history text books were applauded and this decision started a huge discussion in the north of the island. When the books were published 5 years ago, parties, journalists and historians fiercely resisted against the changes. If it is set out with the opinion that history education is a tool in 'Creating National Identity', it is not surprising for the changed history books to take an important place in media and the public agenda. Vehbi Zeki Serter's History of Cyprus book was the only history book to be taught in the schools for nearly 30 years. There can be a lot of reasons to change the books used in history education and generally the history education, but we can say that the main reason is about ideology.

The books of 2004 period which can be seen as a step in any type of communication with 'European Union' and 'Greek Cypriots', defends the mutual respects of two communities by fastening on Cypriot identity and social history. Changing the history text books can be seen as an effort towards speaking the same language which is an important part of reconciliation as Derrida defends. Leading philosophers such as Yiannis Papadakis identified the 2004 lesson books as academic, ideological and 'change of approach' from the point of politics despite the books general weak points. Similarly, Yucel Vural and Evrim Ozyanik described these books as a new historical comment which put forward 'Cypriot Turk Identity' instead of 'Turkish Identity', 'Uniting' instead of 'separation' and 'cooperation' instead of 'rivalry'.

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Comparison of quality of life of families with children with disability and families with children without disability

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Abstract

The paper focuses on the quality of life of families with a child with disabilities, and the site of psychological, physical, social and environmental performance compared to families with a child without disabilities. We bring theoretical and empirical findings experts dealing with the problems of families with child with disability. Below are the options how to offer available social support for family. Survey was conducted in middle of Slovakia focusing on the detection quality of life after the above sites, and for families with children with disabilities compared to families with a child without disabilities. The survey was conducted on a sample of 100 respondents. The biggest difference in the quality of life among families was observed after the site environment, the second is the difference psychologically, the third in physical and in fourth place in the social site.

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Peer-review under responsibility of the Sakarya University.

Keywords: Quality of life; Family; Child with disability; Child without disability.

1. Introduction

All of us have our visions of parenthood and are well aware of the fact that the birth of a child brings along not only joy, but also a lot of worries to the family. With parenthood, parents enter an entirely new and exciting stage of

life which, however, can unexpectedly steal their dreams and ideals. Childbirth and early development is one of the most critical stages in life of every human and it may be connected with risks. The causes of damage may vary and regardless of the type or extent of disability, it is a big blow to parents. A child with disability represents a heavy psychological, physical, social and economical burden for a family and it is important to provide support to the whole family, not only to a child with disability itself. Ondrejka (2001, in: Jakabčic, Poláková, 2006) introduces a global form of Goode's principles related to quality of life of people with disability:

- quality of life of people with disability is influenced by the same factors and relationships that are important for the intact people,
- we become aware of quality of life when basic human needs are threatened and when we have an opportunity to achieve our goals; the significance of quality of life can be consensually assessed by a wider range of people, including the views of people with disability, their families and practitioners,
- quality of individual's life is linked to quality of life of people surrounding them.

According to Poston, Turnbull, Park, Mannan, Marquis, Wang (2003) individual quality of life research has produced sufficient momentum to result in an international consensus document, family quality of life is at the

very beginning of the conceptualization process. Family quality of life as a policy/program outcome is a natural extension from the work on individual quality of life, especially given the strong emphasis in the disability field on a family-centered service delivery model. Since the mid-to-late 1980s, there has been a growing recognition of the importance of family-centered service delivery characterized by family choice, a family strengths perspective, and the family as the unit of support (Allen & Petr, 1996; Bailey & McWilliam, 1993; Dunst, Johnson, Trivette, & Hamby, 1991; Turnbull, Turbiville, & Turnbull, 2000). Bailey and colleagues (1998) have proposed quality of life of families who have a child with disabilities as a "useful indicator of outcomes of policy initiatives" (p. 322). Conceptualization of family quality of life outcomes has been extremely limited to date. In addition to focusing on the personal outcomes of individuals with disabilities, Gardner and associates (Accreditation Council, 1995) have also provided one of the few conceptualizations that includes family-oriented outcomes for the early intervention lifespan stage only. Currently, research on family quality of life is also being conducted in a three-country study involving Australia (Brown, Davey, Shearer, & Kyrkou, in press), Canada (Brown, Isaacs, McCormack, Baum, & Renwick, in press), and Israel (Neikrug, Judes, Roth, & Krauss, in press).

If a family develops in a healthy way, the positive development affects also the development of a child with disability. The child's disability affects the whole family. Practitioners are present only in certain moments of life of a child with disability. The biggest part of care for a child with disability is undertaken by the family and a part of their local community willing to help the family in a difficult life situation. The presence of such child affects quality of life of a family in different ways. In our research, we are investigating quality of life of families with a child with disability in Slovakia from physical, psychological, social and environmental aspect compared to families with a child without disability. Moreover, we are investigating how the respondents themselves rate quality of their life and how they are satisfied with their health. The key component of the empirical part is a survey processed using a standardized questionnaire method.

The aim and subject of a pre-survey

The aim of the survey is to find out about quality of life of families with a child with disability in the town of Šaľa from the parents' point of view compared to families with a child without disability, namely from physical, psychological, social and environmental aspect. Moreover, we are investigating how the respondents themselves rate quality of their life and how they are satisfied with their health.

Accordingly, we have set out the following partial objectives:

1. To find out how quality of life is rated by parents from families with a child with disability and from families with a child without disability.
2. To find out how satisfied with their health are parents from families with a child with disability and from families with the child without disability.
3. To find out about quality of life of a family with a child with disability from physical aspect compared to a family with the child without disability.
4. To find out about quality of life of a family with a child with disability from psychological aspect compared to a family with a child without disability.
5. To find out about quality of life of a family with a child with disability from social aspect compared to a family with a child without disability.
6. To find out about quality of life of a family with a child with disability from environmental aspect compared to a family with a child without disability.

From these partial objectives, following survey questions emerged:

1. How do mothers and fathers from families with a child with disability rate quality of their life compared to families with a child without disability?
2. What is the difference between how the parents from families with a child with disability and how the parents from families with a child without disability are satisfied with their health?

3. What is the quality of life of a family with a child with disability from physical aspect compared to a family with a child without disability?
4. What is the difference between the level of quality of life of a family with a child with disability and of a family with a child without disability from psychological aspect?
5. What is the quality of life of a family with a child with disability from social aspect compared to a family with a child without disability?
6. How will families with a child with disability score compared to families with a child without disability rating quality of life from environmental aspect?

Our survey questions, after a thorough study of literature and other materials on a given subject, have led us to the hypotheses below.

Pre-survey hypotheses:

H1: Mothers and fathers from families with a child with disability will rate quality of their life as poorer compared to families with a child without disability.

H2: There will be minimal difference between how parents from families with a child with disability and parents from families with a child without disability are satisfied with their health.

H3: Quality of life of a family with a child with disability from physical aspect will be significantly poorer than that of a family with a child without disability.

H4: From psychological aspect, there will not be a significant difference between the level of quality of life of a family with a child with disability and of a family with a child without disability.

H5: From social aspect, quality of life of a family with a child with disability will be approximately the same as that of a family with a child without disability.

H6: From environmental aspect of quality of life, families with a child without disability will score higher than families with a child with disability.

Survey methods

The above mentioned hypotheses were tested using the method of a standardized questionnaire of the World Health Organization for assessment of quality of life WHOQOL-BREF (1996), more precisely its Slovak version by the author Kováč, D. (WHOQOL-BREF. Bratislava, WHO – ÚEPs SAV, 1996). This questionnaire measures quality of life by means of four domains – areas of life which contribute to the overall level of quality of life:

1. *Physical domain* – maps the extent to which pain affects the individual's life and to which they are dependent on medical care. Questions feeding these dimensions investigate how people are satisfied with their own mobility, sleep, sufficiency of energy and to what extent they feel discomfort in a physical area.

2. *Psychological domain* – investigates the extent to which people are satisfied with their life, if they perceive it as meaningful and joyful. It also focuses on the frequency of the occurrence of negative emotional states as despair, depression, anxiety.

3. *Social domain* – reflects the satisfaction with personal relationships, sex life as well as with the support that people receive from their friends and local community.

4. *Environmental domain* – is fed with questions investigating the level of quality of life with regard to environmental factors – feeling of safety and quality of environment of people, accessibility of financial and information resources or health services.

The questionnaire is anonymous, consists of three pages with 26 closed-ended questions, of which the first two are evaluated independently and the rest in a way described on the first page of the questionnaire. Respondents circle the number associated with the answer that is according to their personal opinion right. Respondents have to pick from 5 kinds of answers. An accompanying letter asking respondents to fill it in containing justification, the purpose of a questionnaire, acknowledgement and a signature was attached to each questionnaire.

Processing of survey results

The survey was carried out from 1.3.2014 to 31.4.2014. The first two questions of the questionnaire were evaluated independently, collected data was written down in a table and graphs were designed for better visual illustration of differences. Data collected from questionnaires starting with the question No. 3 was transferred into a table following the rules of evaluation on the first page of the questionnaire using methods of quantitative analysis. In the next step, t-tests were used. This test serves to find significant differences between two groups. More specifically, arithmetic mean and “t” values indicating if differences between groups are significant (of statistical importance) were observed. This data was subsequently written down in a table and other tables pointing out to individual domains of quality of life were created which were later transformed into graphs.

All collected data was processed in Microsoft Excel. Each finding is, besides a table or a graph, complemented by a statement and analysis of the result.

Sample set

Respondents forming a survey sample were mothers and fathers from families with a child with disability and mothers and fathers from families with the child without disability in the town of Šaľa. 2 questionnaires were handed out (mother, father) in each family in cooperation with employees of Special elementary school in Šaľa and Elementary school on Bernoláková Street in Šaľa. The criterion for handing out a questionnaire in a particular family was the presence of roughly the same socio-economic indicators: income, parental employment, completeness of a family and number of children. Families with children without disabilities were used as a *control set* necessary for comparison of quality of their life with quality of life of families with a child with disability.

Questionnaires were filled in by 100 respondents (25 mothers and 25 fathers from families with a child with disability and 25 mothers and 25 fathers from families with a child without disability).

Discussion

The aim of the research was to find out about quality of life of families with a child with disability in the town of Šaľa from parents' point of view compared to families with a child without disability, namely from physical, psychological, social and environmental aspect. Moreover, we were investigating how the respondents themselves rate quality of their life and how they are satisfied with their health. Our sample set consisted of respondents from two groups – mothers and fathers from families with a child without disability and mothers and fathers from families with a child with disability.

Following statements could be made as far as the set out hypotheses are concerned:

H1: Mothers and fathers from families with a child with disability will rate quality of their life as poorer compared to families with a child without disability.

In order to test a given hypothesis, we used the questionnaire question No. 1. Research results show that most respondents from families with a child with disability rated quality of their life as neither poor nor good, other respondents as rather poor. Respondents from families with a child without disability mostly rated quality of their life also as neither poor nor good, however, the rest of the respondents as rather good. Therefore, we can state that quality of life of a family with a child with disability in the town of Šaľa from the parents' point of view is, as we hypothesized, rather poorer than quality of life of a family with a child without disability. This statement is understandable, as the family with a child with disability is, as we mentioned above, affected by the child's disability in its life, which may negatively interfere with particular dimensions (or aspects) of life.

H2: There will be minimal difference between how parents from families with a child with disability and parents from families with a child without are satisfied with their health.

In order to test a given hypothesis, we used the questionnaire question No. 2. Results show that there is, as we hypothesized, minimal difference between how parents from families with a child with disability and parents from families with a child without disability are satisfied with their health. We understand it in the sense that living in a family with a child with or without disability has no influence on the level of satisfaction of a mother or father with their health.

H3: Quality of life of a family with a child with disability from physical aspect will be significantly poorer than that of a family with a child without disability.

The results above show that quality of life of a family with a child with disability from physical aspect is poorer than quality of life of a family with a child without disability, the difference being, as we hypothesized, significant. Therefore, we can state that families with a child with disability are less satisfied with their own mobility, sleep, sufficiency of energy and perceive higher level of discomfort in a physical area than families with a child without disability.

H4: From psychological aspect, there will not be a significant difference between the level of quality of life of a family with a child with disability and of a family with a child without disability.

The obtained results show that there is a significant difference between the level of quality of life of a family with a child with disability and of a family with a child without disability. Hence, we can state that respondents from families with a child with disability perceive their life as meaningful and joyful to a smaller extent compared to families with a child without disability. Although we didn't hypothesize such a result, it is understandable that the presence of a child with disability markedly affects even this area of life and it is also connected with a higher frequency of occurrence of negative emotional states as despair, depression, anxiety.

H5: From social aspect, quality of life of a family with a child with disability will be approximately the same as that of a family with a child without disability.

The results show that quality of life of a family with a child with disability from social aspect is, as we hypothesized, approximately the same as that of a family with a child without disability. Therefore, we can state that families with a child with disability are approximately equally satisfied with personal relationships (parents or married couples also with their sexual relationships) and support that they receive from friends and local community as families with a child without disability.

H6: From environmental aspect of quality of life, families with a child without disability will score higher than families with a child with disability.

The results show that from environmental aspect of quality of life, families with a child without disability scored, as we hypothesized, higher than families with a child with disability. The difference emerging from the results is markedly significant, actually the biggest from all domains. Therefore, we can state that the level of feeling of safety and quality of environment of a family with a child with disability, hence the accessibility of financial and information resources and health services, is much lower than of a family with a child without disability. This domain involves mainly the economic side, so it's understandable that a family with a child with disability perceives a higher level of discomfort in this area, as it needs more financial resources in order to satisfy all its needs and proper functioning than a family with a child without disability.

According to Bratská (2006), coping with burdensome situations appears as a significant indicator of quality of life. She distinguishes between two terms – adaptation and coping. According to her, *adaptation* means coming to terms with ordinary and increased burden (within limits of our tolerance of burden, we apply methods of solving burdensome situations to which we have predispositions and experience). *Coping* represents a higher level of adaptation that is necessary for dealing with limit and extreme burden (we find ourselves at the limit of our tolerance of burden, it's a matter of solving sudden, unusual burdensome situations which often overreach our resources; we need to find, examine, test and adopt necessary coping methods first). Křivohlavý (2002)

understands coping with life burdens as a *dynamic process* in which it comes to transactions (mutual interactions between a person and a given situation). On one hand, there is a given person (or a family) with certain resources, possibilities, values, beliefs. On the other hand, there is a disability imposing certain requirements on a person (or a family) and influences them variously.

Few research studies have explored how the level of a child's behaviour problems leads to psychological distress in parents of children with autism. Jones, Hastings, Totsika, Keane Rhule (2014) explored whether psychological acceptance and mindfulness mediated this relationship between child behaviour and parental distress. Seventy-one mothers and 39 fathers of children with autism participated, by reporting on their own positive and negative psychological well-being and their child's behaviour problems. Psychological acceptance was found to act as a mediator variable for maternal anxiety, depression, and stress, and for paternal depression. General mindfulness and mindful parenting had significant mediation effects for maternal anxiety, depression, and stress. These results contribute to evidence that mindfulness and acceptance may be important parental psychological processes, with implications for parent support.

In Slovakia, there are several volunteer organizations, associations and clubs the aim of which is to help the people with disability and their families and to promote and support all measures with the intention to help and improve social inclusion of persons with disability. Organizing gives families a better opportunity to expand their knowledge of the issue of disability, exchange experience and gain both mental and material support, mutual understanding and help. It is an old truth that sharing your problems with others helps to reach emotional balance. Most parents receive help from professionals and friends and seek families with children with similar issues. Parents can associate informally in a group of a few persons with similar fate, life situation or a comparable problem or join existing organizations supporting these activities. Parental activities are beneficial not only for parents, but also for their children. It is up to families themselves, if they want to join this process or not.

Conclusion

Every family forms an original system with its specific rules and ways of coexistence. Nowadays, the number of families with a child with disability has risen mainly as a consequence of improving health care for newborns who often wouldn't survive without the help of professional personnel. Initially, parents often don't realize what the presence of a child with disability means for the whole family. The family has to adjust its life to such child, with all limitations and increased burden imposed on all family members. Child's disability thus affects life of the whole family, more specifically its quality from various aspects.

In our research we used a standardized questionnaire to compare quality of life of a family with a child with disability to quality of life of a family with a child without disability in the town of Šaľa from parents' point of view considering its different aspects. We found out that the biggest difference to the disadvantage of a family with a child with disability exists in quality of life from environmental aspect. This comes as no surprise, as families with a child with disability need in general more financial resources for satisfying their needs than families with a child without disability; however, support of such families from the state (or the town) is not sufficient. The slightest, almost minimal difference was observed in quality of life from social aspect. This means that families with a child with disability in the town of Šaľa are approximately equally satisfied with personal relationships and support that they receive from friends and local community as families with a child without disability.

As far as physical and psychological aspect of quality of life is concerned, families with a child with disability report lower level of satisfaction than families with the child without disability; however, the difference is not as marked as observed in environmental aspect.

It is important that the society gives greater attention to supporting families with a child with disability, creates room for social integration and provides support in the area of comprehensive rehabilitation in the sense of networking of health, social and pedagogical-psychological services.

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INTE 2014

Comparison of self-regulation in children and adolescents in children's home and protective educational facility

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Abstract

We focus on the process of self-regulation in children and adolescents living in institutional care. Based on a content analysis of transcripts of two focus groups carried out in a children's home and a protective educational facility, we attempted to detect, describe and explain the mechanisms of self-regulation in children and adolescents aged 11-18 years. The purpose of the study was to reveal how the participants describe their performance in four components of self-regulation processes, i.e., in setting personal goals, in self-regulation of behaviour, in self-regulation of conflicts and in self-regulation of learning. Within the aforementioned content analysis we compared the previous areas in two types of institutional facilities for provision of institutional and protective care.

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Peer-review under responsibility of the Sakarya University.

Keywords: self-regulation; children's home; protective educational facility; focus groups; content analysis.

Introduction

Social sciences focusing on exploring human interactions in specific situations and environments have been paying increased attention in the past fifty years to self-regulation, which is perceived as the ability to develop, implement and flexibly aim one's planned behaviour towards achieving one's own goals (Brown, Miller, Lawendowski, 1999). A developed ability of self-regulation thus becomes a significant potential enabling the individual to live in the current world. Contrarily, in professional literature a low level of self-regulation is associated with behavioural and interpersonal interaction problems. For example theory and research of self-regulation in the field of alcohol abuse (Carey, Carey, Carnrike, Meisler, 1990; Chassin, DeLucia, 1996; Wills, Sandy, Yaeger, 2002), drug use (Baumeister, Heatherton, 2009), procrastination (Eerde, 2000; Sénécal, Vallerand, 1995; Motiea, Heidaria, Sadeghic, 2012), students' high rates of drop-out and truancy (Veenstra, Lindenberg, Tinga, Ormel, 2010), etc.

Due to the fact that we often encounter risky behaviour in case of young people living in institutional-type facilities of children's homes and protective educational facilities, we were wondering how and in which areas their self-regulation is developed. Although, the link between self-regulation and risk behaviour was ascertained, especially abroad, similar studies are absent in the Czech settings. The importance played by self-regulation of behaviour in children and adolescents with risk behaviour has not been clarified yet. What are the mechanisms of its functioning and how it is reflected in the behavioural manifestation of children and adolescents in the institutionalised environment. The significance of self-regulation of behaviour (its deficit) was demonstrated in relation to a number of risk areas such as impulsive behaviour, symptoms of anxiety, depression, suicidal

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behaviour, addictive behaviour, etc. (Endler, Kocovski, 2005; Maes, Gebhardt, 2005). A low level of self-regulation is generally associated with a higher level of externalising and internalising of problem behaviour in childhood and adolescence (Eisenberg et al. 2005; Tangney et al., 2004). Self-regulation is often looked into in connection with problem behaviour, as by supporting its development in at-risk groups we may significantly contribute to its prevention. For this reason, we focused our research of self-regulation on the target group which can be described as an at-risk group. Within the settings of "alternative institutional care" or residential education we are interested in the problems associated with disorders of behaviour and perception of children, we deal with the optimal organisation of activities, we try to determine the most suitable processes (education, rehabilitation, psychotherapy) that would lead us to positive changes (Škoviera, 2007). According to Škoviera (2007), without the context above alternative institutional care would be a mere isolation of a child with behavioural problems from the society.

Aim of the study

Thinking and acting of residents of children's homes and protective educational facilities is a rarely researched environment, in spite of the fact that it may offer valuable data on this segment of youth population. In this study we concentrated on self-regulated processes in residents of these institutions as exposed in focus interviews. Rather than perceiving self-regulation as a chain of discrete acts beginning by setting a goal and ending in a task completion evaluation, we concentrated on self-regulation areas that we find important for understanding the beliefs and actions of residents of these institutions. *The purpose of the study was to reveal how the participants describe their performance in four components of self-regulation processes, i.e., in setting personal goals, in self-regulation of behaviour, in self-regulation of conflicts and in self-regulation of learning.* In addition, we focused on how much of these processes and actions were shared by, or different between, these institutions.

Method

In the presented study we were able to implement data collection applying *qualitative research strategies* and using the technique of focus interviews in two types of residential institutions for children and youth, i.e. in a children's home and a protective educational facility on the territory of the Zlin Region (one of the 14 regions of the Czech Republic).

Interview of a focus group is a form of a group interview, carried out in order to collect valuable data from respondents through their mutual interaction (Morgan, 2001). A moderator leads the group so that there was an interaction between him/her and the respondents, but also – more importantly - among the respondents themselves. Such an interaction process uses the so-called group dynamics which serves to provoke reaction among group members in interaction.

As the official names of the two institutions are rather long to be used persistently throughout the text, we shall further refer to them as ChH (a children's home) and PEF (a protective educational facility). Video recordings of the focus interviews were made.

Characteristics of the surveyed institutions

According to Statistical yearbook of the Czech Republic 2013 in school year 2012/2013 there were 220 children facilities of institutional and protective care in the Czech Republic, providing care to the total of 6,941 children (out of which 74,3 % in ChH and 25,7 % in PEF).

The facilities of ChH in the Czech Republic provide care to children with court-ordered institutional care. In relation to children, the institution primarily holds an educational and a social role (§ 12 of Act No. 109/2002 Coll.). PEFs in the Czech Republic are established pursuant to § 2, paragraph 1, point. d) and § 14 of Act No. 109/2002 Coll., On institutional and protective education in schools and on preventive educational care in school facilities and on Amendments to other Acts, as amended (particularly Act No. 383/2005 Coll.). According to § 14, paragraph 1 of the Act cited, a preventive educational institute/facility is intended for children over 15 years of age with serious behavioural problems, who have been ordered institutional or protective care. In relation to the

wards, the facility shall perform educational and social roles. In exceptional cases, a child under the age of 15 may be placed into such a facility (see § 14, paragraph 3 of Act No. 109/2002 Coll.).

In accordance with a Canadian sociologist Goffman (2007) ChH and PEF can be considered a type of total institutions. Total institutions, as claimed by Goffman, are forced residential communities that significantly limit the contact of persons entrusted in care with the outside world. The combination of attributes of a residential community with a formal institution is called a social hybrid by Goffman (2007). Upon entering a total institution, the process of “mortification” of the user begins - the individual is “programmed”, “trimmed” and “framed” into a form that is more manageable by the apparatus of a formal organisation. The child institutional care system has been currently undergoing the process of a necessary transformation and deinstitutionalisation in the Czech Republic, partly due to a large number of children placed in all types of long-term institutional care. By 2018 the Government of the Czech Republic undertook to have created a functional system ensuring consistent protection of the rights of children and meeting their needs. The transformation is based on the assumption that the best social environment for a child is a family. Institutional care should thus be the last and extreme measure in dealing with a difficult life situation of a child.

Participants of the focus group interviews

The first focus interview was conducted with 7 participants in a ChH. The participants involved were 4 boys and 3 girls aged 12 to 16 years. The second focus interview included seven juvenile boys aged 15 years and over living in a PEF. In both cases, the participants volunteered to participate in the research. In the PEF, involvement in the study was awarded by "plus points", so a slightly different kind of motivation of the participants can be assumed than an interest in the issue. The focus of the discussions was self-regulation. The official part of the focus group took 71 minutes in the ChH and 42 minutes in the PEF. It was a semi-structured group with a script prepared in advance, identical for both facilities so that the results would then be easily compared. Both groups were led by the same moderator and an assistant moderator and their roles were clearly divided in advance. The moderator and the assistant moderator of the focus group (Miovský, 2006) prepared a script and a detailed strategy to manage the group, including the areas and model questions. Both, the moderator and the assistant moderator, kept records during the group discussions. They noted down interesting moments of the individual areas. Questions arising from notes taken were asked at the end of each discussion area.

Members of both groups were informed that the session will be recorded and were also asked to consent to the recording and given the possibility to refuse participation in the group. They were also informed about the group rules (only one person speaking at a time, all conversations are taking place in a forum, all members present take part in the discussion, no one has a dominant role, everyone has the right to express their opinion, no views/opinions are to be criticised, everyone has the right to refuse to answer, or terminate their participation in the group, the information shared within a group session remain within the group, the participants call themselves by their first names, written on adhesive tag prior to the session). After the start-up phase, an opening discussion and motivation followed, then moving on to the core of the discussion and to a conclusion.

Analysis strategy

The audio tracks of the video recordings were transcribed into a written form (a transcript). It was a verbatim transcript of the verbal interview between the moderators and among respondents, including substandard expressions. A verbatim commented transcription was used capturing and describing the social climate during the interview as well. Nonverbal expressions were included in the transcript when expressing a certain meaning (hmm; nod; pointing at XY) or when commenting on the atmosphere of the interview (laughter; poking Y). Some parts were labelled as (incomprehensible). An estimate of the incomprehensible words was sometimes provided. For privacy reasons, the names of all members of the transcript were used anonymously.

In the analysis of the focus interview transcripts, we used the so-called thematic analysis (Braun, Clarke, 2006). The transcripts were repeatedly read to get the sense of the content, then they were segmented into semantic categories, or subtopics. They were then grouped to obtain higher level categories, or topics. To meet the requirement of the constant comparison procedure, the topics and subtopics were analysed, grouped and re-

grouped in consecutive rounds, first separately in each of the interview, then across them to receive a common picture of the field.

Findings

The findings are divided into four areas. We provide their detailed content analysis below in separate blocks.

Setting personal goals

Personal goals belong to the structure of human needs. Every human being has needs and thus sets personal goals to pursue. Planning personal goals is therefore an important regulation factor of humans. The data showed two levels of personal goals, the first one is desire, the other one is intention. *Desire* is a wish, it is a target situated in the future which will bring some personal benefit such as satisfaction or happiness. Desire, in contrast to intention, does not require much effort of the person. It is more or less a dream. If desire is materialised, it is a gift (like being presented a watch or a vehicle). A surprising finding is that participants of both institutions did not abound with desires. Their strategy is to wait if a desire emerges in the future: “*I do not think about it (desire), I let things flow (shrugs)*”. A lack of desires of the focus group participants may be attributed to limited personal values and narrow life experience due to being raised in incomplete and/or socially deprived families.

In contrast to desires, participants had a wide array of *intentions*, i.e., goals which are planned and deliberately pursued. To achieve a goal typically requires a sequence of resolutions, or multiple resolutions at a time, and is accompanied with a volitional control of actions. We therefore consider intention to be a higher level regulation goal than desire. Participants in the ChH displayed intentions related to school success (improving school grades, graduation from school), and to family planning and management (starting a family, taking care of one’s child – the latter concerns a juvenile mother participant). A precious intention was to escape from relying merely on social benefits (*I want to be different, I want to take care of the little one (son) to provide him with anything he needs so that he will not end up like myself. And simply not, I shall not sit at home and wait with my hands crossed [for the social benefits]*). Love of prospective children was reported in the PEF, and both groups had intentions to achieve in sports. Remarkably, these were sports with a higher status (i.e. airplane piloting, judo). Many intentions were conditioned by achieving a sub-goal: to be released from PEF requires a certain behaviour improvement on the part of the participant, to find a job (other than a manual one), it requires persuading the mother that the subject is able to perform such a job.

Responses to a failure in achieving a planned goal had a distinct pattern. It was an analysis of causes of failure followed by a correction of errors, change of perspectives, and finding support in peers. A failure generated repeated trials or/and an increase in efforts (like strength in sports). Blaming of others for one’s own failure to achieve goals was not recorded. The causes of failure were attributed to one’s misregulation or underregulation. No goal was reported to be dismissed as a result of failure, which indicates that the planned goals were significant for the participants.

Self-regulation of behaviour

Behaviour is here defined as a manner of acting, and is governed by implicit or explicit social rules. The two focus interviews concentrated on participants’ misbehaviour, which is common in young people in the facilities of this kind, such as ChH and PEF.

In order to regulate their behaviour, the individual must recognise that the action is inappropriate. Recognition of misbehaviour was a somewhat easy task for the participants. In both institutions they recalled a variety of actions in which their conduct was ill: cursing, cheating, theft, fighting (in pubs, i.e. brawls), cigarette smoking and alcohol drinking. In PEF, usury occasionally appeared, probably modelled on adult Roma people, as well as substance abuse. In other words, socially inappropriate acting, personal health harming and physical attacks were referred to by the research participants as misbehaviour. These were assessed as one’s own misbehaviour or as peers’ misbehaviour. A kind of supra-misbehaviour was reported as well – i.e. encouraging others to misbehave. Encouragement may be, however, considered a verbal parallel to behavioural imitation.

The data revealed two sources of misbehaviour. The strongest reason was social conformity. Young people

stuck to rules and traditions of the reference group because they find it socially desirable. The emerging misconduct is then a logical consequence of self-adaptation to the given social rules of a group. The second source of misbehaviour was impulsivity. While the former source is external, the latter is internal. It is caused by a lack of control of inner impulses, which results in non-considered actions. Impulsivity hinders the participant from forethought and anticipation of consequences of their behaviour. Thus the subject chooses short-term gains rather than long-term ones (Rachlin, 2000).

The participants were not only aware of their misbehaviour but they also recognised ways of a possible behavioural change. This suggests that they understand when behaviour is undesirable and see some possible actions to abandon or avoid the situation. Two kinds of behavioural changes were identified in the data. The first one is external control. The individual is influenced by someone else to avoid misbehaviour. Communication situations were displayed to exemplify how this control is performed – e.g. persuasion by a relative or a peer, explanation of consequences of violating the social rules and the like. The second kind of behavioural change is inner control. This can be considered a higher level approach as the participants understand the consequences of misbehaviour which, in turn, affects the planning of their future actions. The subject has the intention and the will to change. The will to change is a manifestation of responsibility of the person towards his/her behaviour. Though it is recognised that intentions do not necessarily lead to changes in behaviour (Sheeran, 2002), this shows that participants at least stand at the doorstep of change through self-regulation. One participant explained how she crossed over this metaphorical doorstep when she resisted a temptation to re-start smoking cigarettes: “I felt a sting on my tongue, and also burning in my throat, I had all my nails bitten, and my mouth was bloated.” Setting time boundaries is an important element in one’s behavioural control: “I promised to myself that if I persist a week, then I will persist longer.” Such a level of behavioural control is an apt manifestation of the subject’s self-efficacy (Bandura, 1997).

Self-regulation of conflicts

A conflict is a clash between two or more persons which occurs due to irreconcilable behaviour, attitudes and interests between them. A conflict leads to the need of resolution, either immediate or postponed. In addition to verbal and physical manifestation, a conflict is experienced emotionally and can be accompanied by a wide range of emotional reactions.

The participants in both groups were *aware of the existence* of conflict situations and could identify the signs of a conflict. However, they were unable to anticipate a situation in which a conflict would occur in the future. The conflict is simply a now-conflict, not a will-be-conflict. The lack of conflict anticipation seems to be an obstacle in avoiding undesirable behaviour of participants or avoiding conflicts as such. However, the participants were still able to assess the intensity of ongoing conflict situations.

A conflict was *initiated* most frequently by a peer. In the PEF, self-initiation was admitted as a source of conflicts (*The problem was mainly on my part*). The participants in the ChH did not admit their initiation of conflicts but they recognized they were equally engaged in the conflict as was the conflict initiator once the conflict began. This was true when physical reaction occurred, typically a fight between boys.

The sources of conflicts are numerous and they cause damage of the self-esteem of the target subject. Both groups shared the same conflict sources, such as telling on (so-called snitching) on the target subject, vilification, lying, and slandering. In the ChH sources as curses (obscene expressions) and racial verbal attacks were discussed among the focus groups participants. To sum up, the sources of conflicts emerge from an insult targeted at a person, rather than from physical attacks, and range from moderate to aggressive (racist curses). A physical attack may follow a verbal exchange, which had previously caused disappointment, distress or anger. An important consequence of a conflict is defence of self-esteem of the target subject. One participant described an altruistic deed – a defence of a handicapped friend who was a target of a conflict. Overall, the ChH participants provided more answers to this topic than the PEF participants and their range of conflicts sources were somewhat larger.

Experiencing conflict situations by participants is both emotional and physical. The participants in ChH were unable to describe their inner state. The typical feelings were pressure in the breast, anger, and range. The PEF participants also described shivering and weeping. The description revealed high impulsivity and low self-control (*If I am angry, I do not even know I am*). There were signs of an ability to trace the chain of one’s reactions to a conflict situation in a ChH participant.

Responses to conflicts were threefold, i.e. resistance to the attacker, tempering one’s feelings and emotions

and self-targeted responses. Concerning the first kind of response, the strength, intensity, duration and the type of reaction depends on the severity of the conflict. Milder conflicts can be overlooked. More severe attacks are followed by verbal responses (shouting and curses); still more severe attacks are responded to physically. The physical reaction was revealed in both groups of the participants. Escalation of tension may result in exchanges of physical attacks (*If I am pounded, I will hit more vigorously; A fight is the best solution*). The ChH group provided more detailed accounts on physical responses. A peculiar reaction to an emotional discomfort in a conflict situation is destruction of furniture, i.e., the emotional tension is released by attacking an inanimate object, however not belonging to the attacking person (school facility). As all physical responses are explicit, the subject exhibits socially inappropriate behaviour, thus sacrifices an immediate emotional benefit for personal reputation.

The strategy of *tempering ones emotions* entails curtailing rather than masking them. Such behaviour can be classified as a defensive strategy. The participants in both groups described a wide range of temper regulation processes, the most common being ignorance of the conflict initiator or suppression of anger. The latter is an advanced strategy since it requires larger effort than other strategies. That is why one participant appraised himself: *"I am really surprised that I can cope with it. I learned how to do it."* However, the participant was unable to explain how he acquired this strategy. Another strategy is channelling the attention away from the conflict initiator or reflection on the situation or disputing with the initiator on the points of the conflict. Another defensive strategy is a retreat from the situation. A participant in the PEF described his strategy as having a talk with his girlfriend who has calming effects on him. A large section of tempering strategies is represented by drug use (cigarettes, soft drugs, alcohol) – in both groups of the participants. Sport activities serve as means of releasing emotional tension (*I press my teeth firmly and kick the ball fiercely*).

Self-regulation of learning

As the participants of focus groups were subjects of educational institutions, learning responsibility was their everyday business. They reported a range of strategies to cope with learning tasks and with classroom attendance. The former topic prevailed in the ChH, the latter was typical in the PEF. The school day was referred to as "obligation time" by both groups; they were obliged to sit in school and follow orders and instructions. Some school subjects were reported as unpopular (Physics, Math, History, the Czech language) but the participants admitted that the school subjects are not a burden, rather the burden is the obligation to attend the school. This attitude is probably the reason of their passivity during lessons.

The strategies to *cope with homework and assignments* was either to do it as soon and as quickly as possible (*I simply sit down to do it and when once I have completed it I get out of the home*), or to postpone the task as late as possible. The need to do the homework in order to avoid punishment (ban of some popular activities) or to get "points" is classified as extrinsic motivation. Cooperation strategies mean doing the assignment jointly with a schoolmate, or exploiting a schoolmate by asking him/her to do the task. An escape strategy was to openly reject to do home assignments. A more sophisticated strategy was to refuse to do assignments only up to the edge of tolerance by a teacher.

In brief, regulation of learning in the participants is dominated by time management strategies, cooperation strategies and task avoidance strategies. Metacognition strategies have not been identified in the interview data. In the background of these strategies there is a rather negative attitude of research subjects towards the educational institution.

In connection with the findings above, we can determine three components of motivation, which is closely related to self-regulated learning: self-efficacy, attribution beliefs and the perceived value of the task. These components and their significance within learning motivation was confirmed by a number of research studies (e.g., Pintrich, 1999; Linnenbrink, Pintrich, 2003; Bandura et al., 2008).

Discussion

Self-regulation is a process by which individuals activate, guide and monitor their actions. In the literature, numerous research studies concentrate on self-regulated learning – either aiming at assessing the current level of self-regulation skills in students (e.g., Pintrich, De Groot, 1990)) or focusing on developing these skills (e.g., Boruchovitch, Ganda, 2013). This study differs from these attempts. As the environments of the study were

institutions that provide care for young people with severe disorders in their conduct, self-regulated learning was one but not the sole target of this study. We also concentrated on other aspects of self-regulation situations: setting personal goals, self-regulation of behaviour, and self-regulation of conflicts.

Majority of self-regulation situations that emerged in the interviews were *harsh actions* (i.e. misbehaviour, conflicts, avoiding school responsibilities). Their origin is to be attributed to the social environment in which the participants previously lived. Typically, they were raised in a negative family environment, they witnessed hostile parental relationships and often engaged in conflicts with parents. In spite of the positive effects of the institution in which they currently reside, they are still under a detrimental peer group influence. However, the positive aspect here is that they recognise the detrimental circumstances and consider moving out from them.

We distinguished four self-regulatory processes that were present across the four areas of self-regulation: a) recognition of situation, b) sources of action, c) execution of action, and d) response to the situation. In self-regulation of behaviour the participants identified elements of misconduct, were able to detect the sources of misbehaviour, consider possible actions to control misbehaviour and possibly perform them. In self-regulation of conflicts the participants were aware of conflicts as a form of irreconcilable behaviour, attitudes and interests between persons, they saw conflicts as a cause of personal harm, were able to describe how conflicts happen, identified their inner and external responses to a conflict, and explained how to avoid conflicts. In self-regulation of learning the participants understood their responsibilities, reported strategies to accomplish them, including tactics of assignment avoidance, and time management.

Though the findings indicate some differences in self-regulation processes between the two institutions, the data converge rather than diverge. The participants provided broad and rich accounts of their self-regulation processes, thus enabling us to see and understand this area of experience of young people residing in the facilities of this kind.

As an interview was used as a research method in this study the responses elicited by respondents represent declarations rather than actual regulation of behaviour. Such behaviour could diverge from the declared one. However, it could be detected only by live observation of self-regulation situations. This, however, was impossible to accomplish because of technical, time and methodological constraints. In the interviews, the participants frequently commented on each other responses, providing corrections and additional information contributing to the validity of their responses.

Acknowledgement

The article was created within a grant project GA CR No. 13-04121S *Understanding the Mechanism of Self-Regulation in Children and Minors in Institutional Care*.

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Computer aided design in mechanical engineering education

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Abstract

Technical drawings serve as a plan to the construction of objects in the drawing. Technical drawing describes the process of producing a pictorial representation of a designer or engineer's vision into a physical form. Therefore, Technical drawing is one of the most subjects in mechanical engineering. In this study, Technical Drawing and Computer Aided Drawing courses which are given in the mechanical engineering programs of Turkey Universities are discussed. Computer Aided Drawing courses are evaluated according to the International accreditation criteria.

Özet

Teknik resim bir parçanın yapım resmini verir. Teknik resim, bir tasarımcıya veya mühendise parçanın imalat sürecini anlatmak için kullanılır. Bu yüzden, teknik resim makine mühendisliğinde en önemli konulardan biridir. Bu çalışmada, Türkiye'deki üniversitelerin makine mühendisliği programlarındaki teknik resim ve bilgisayar destekli teknik resim dersleri ele alınmış ve ilgili ders programları incelenmiştir. Uluslararası akreditasyon kriterleri göz önüne alınarak, bilgisayar destekli teknik resim ders programları değerlendirilmiştir.

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Peer-review under responsibility of the Sakarya University.

Keywords: Computer Aided Engineering, Technical Drawing, Mechanical Engineering

GİRİŞ

Teknik Resim ; endüstride makine parçalarının yapımı ve montajı için gerekli olan bütün bilgileri taşıyan , bir ölçek dahilinde ve standartlara uygun olarak resim düzlemi üzerine çizilen resimdir. Gerek klasik sistemle gerekse bilgisayar ortamında çizilebilen teknik resim mühendislikte en gerekli ve önemli alanların başında yer almaktadır. Sanat resimleri , serbest elle veya belirli şartlar dahilinde , özel resim araç ve gereçler kullanılarak çizilir. Teknik Resim ise kabul edilen çizim kural ve metotlarını bilen ve uygulayabilen mühendisler ve teknisyenler tarafından çizilir. Teknik resim, endüstride imal edilecek mamüllerin (yapılar, makineler, makina parçaları vb.) kullanılmaya hazır halini eksiksiz olarak belirten, fonksiyonunu yerine getirebilmesi için gerekli bütün şartları taşıyan ve teknik ayrıntılarıyla birlikte çeşitli kesitlerde görünümünü veren çizimlerdir. Aynı zamanda, mühendisler ve teknik elemanlar arasında iletişim kurmaya yarayan ortak bir lisan olan teknik resim çizimleri çizgilere, işaret ve sembollere yüklenen özel anlamlar sayesinde hazırlanmaktadır. (Bolat&İmrak,2001)

Endüstrinin gelişmesiyle, seri üretim artmış, dolayısıyla teknik çizimde daha önem kazanmıştır. Herhangi bir parçanın üretiminin yapılabilmesi için imalat resminin eksiksiz olarak mühendis veya teknisyen tarafından çizilmesi gerekir. İlk başlarda imalat resimleri standart kağıtlar kullanılarak elle çizilirken, günümüzde bilgisayar da çizim programları kullanılarak çizilmektedir. Çizilen imalat resimleri teknik elemanlar tarafından çeşitli makineler kullanılarak imal edilirler. Bu yüzden özellikle makina, endüstri, tekstil, kimya, metalürji ve gıda mühendisleri alanında eğitim gören mühendisler için en gerekli ve önemli alanların başında teknik resim gelmektedir. Gerek klasik ve gerekse bilgisayar ortamında çizilen resimler güncel standartlara uygun, temiz ve anlaşılır olmalıdır. Bilgisayar ortamında çizilen resimler de geometrik modelleme ve analizlerinin yapılması mümkündür. (Luzadder, 1997)

Bu çalışmanın birinci bölümde teknik resmin tarihsel gelişimi ve öneminden bahsedilmiş, ikinci bölümde bilgisayar destekli teknik resim hakkında bilgi verilmiş, üçüncü bölümde makina mühendisliği eğitiminde Türkiye'deki ve yurtdışındaki üniversitelerdeki teknik resim eğitim programları incelenmiş, son bölümde de sonuç ve öneriler verilmiştir.

TEKNİK RESİMİN TARİHSEL GELİŞİMİ VE ÖNEMİ

Tarihte insanlar iletişim kurmak yani duygu ve düşüncelerini aktarmak için konuşma dilini kullanmış ve buna bağlı olarak yeryüzünde farklı lisanlar ortaya çıkmıştır. Kalıcı hale getirmek ve saklamak içinde çeşitli sembollerin kullanıldığı yazı dili geliştirilmiştir. Yazının bulunmasından önce resimler kullanılmıştır. Resim tekniği tarihin ilk çağlarından itibaren kullanılmış ve teknolojinin gelişmesiyle de ihtiyaçları karşılamak için hızlı bir gelişim göstermiştir. MÖ. 1200 yılında yapılmış ilk mağara resimlerine ve MÖ.3200 yılında Mezopotamya'da tekerleğe ait çizilmiş resimlere rastlanılmıştır. Mühendislik alanında ilk resim Gueda tarafından MÖ.2430 yılında çizilen planlardır. Resim alanında en önemli gelişim MÖ.450 yılında Antik Yunan'da mimari alanında perspektif resmin kullanılmasıdır. Rönesans devriminde Giotto ve Duccio tarafından boyutlardan bağımsız olan perspektif resim tekniği uygulanmış ve Masacio ariel perspektifi adı verilen resim tekniğini geliştirmiştir. Resim tekniğinde boyutların kullanıldığı resim çizimi Brunelleschi (1377-1446) tarafından geliştirilmiştir. Francesca /1420-1492) perspektif resimler üzerinde çalışmış ve ortagonal projeksiyon metodunu geliştirmiştir. Leonardo Da Vinci (1453-1516) ilk teknik resim kurallarına uygun çizim yaparak, perspektif resim çizimlerinin teorisini yazmıştır. Dürer (1471-1528) ortagonal projeksiyon metodunu kullanarak çizimler yapmış ve perspektif resim tekniğini geliştirmiştir. Ayrıca ilk defa cetvel ve pergel kullanarak çizimler yapmıştır. Fransız araştırmacı Monge (1746-1818) ilk tasarı geometri kitabını yazmıştır. Farish 1820 yılında isometrik resim tekniğini uygulamıştır. Daha sonraki yıllarda Sutherland 1963 yılında bilgisayar grafiği üzerinde çalışmalara başlamış ve böylece çizim alanında bilgisayar kullanımını başlatmıştır. (Bolat&İmrak, 2001) Teknolojinin hızla gelişmesiyle bu alanda kullanılan programların sayısı artmış ve günümüzde mühendislik alanında bütün çizimler bu programlarda hızlı bir şekilde çizilmektedir.

Bir teknik resim çiziminde parçaların biçimini, boyutlarını, malzemesini ve kaç adet imal edileceğiyle birlikte imalattan sonra yüzey işlemleriyle ilgili bilgileri verir. İmalatı yapılacak parçanın çiziminde verilen bütün bu bilgiler standartlara uygun olarak resim üzerinde gösterilir, bu nedenle bu resimler ancak bu standartlar ve metodları bilen kişiler tarafından çizilir ve okunabilir. Bu yüzden bu alanda çalışacak mühendisler bu bilgilerin eksiksiz olarak verilmesi ve öğretilmesi çok önemlidir. Mühendisler standartları yani çizim kurallarını çok iyi bilmeli ve uygulayabilmelidirler. Genellikle üniversitelerde Teknik resim ve Bilgisayar Destekli Çizim adı altında bu dersler verilmektedir. Mühendislerin dışında teknik okulların meslek dallarının öğreniminde bu dersler verilmektedir.

Günümüzde sanayinin her alanında teknik resim uygulaması geniş bir şekilde kullanılmakta ve mühendis ile teknik eleman arasında ortak dildir.

BİLGİSAYAR DESTEKLİ TEKNİK RESİM

Günümüzde imalatı yapılacak parçaların iki boyutlu ve üç boyutlu çizimleri ile geometrik modellerin yapıldığı Bilgisayar Destekli Teknik Resim (Computer Aided Drawing CAD) yaygın olarak kullanılmaktadır. Bilgisayar destekli teknik resmin ilk uygulaması 1963 yılında Sutherland tarafından doktora tezi çalışmasında sunulmuştur. Bundan sonraki yıllarda çizimler bilgisayar ortamına aktarılmış ve kullanılmıştır. Birçok uygulamada olduğu gibi teknik resimde de bilgisayarın kullanılması birçok avantaj sağlamaktadır. Mühendislik uygulamalarında kullanılan birçok gelişmiş CAD programları bulunmaktadır. Bunlar dan başlıcaları olarak AutoCAD,

Pro/Engineer, CATIA ve Solidworks olarak sayabiliriz. Üniversitelerin çoğunda bu programlar öğrencilere bilgisayar laboratuvarında öğretilmektedir. Temel teknik resim bilgisi olan teknik elemanlar ile mühendisler rahatlıkla bilgisayarı ortamında çizim yapabilirler. Bunun dışında bilgisayar destekli teknik resimin kullanıcıya sağladığı başlıca avantajlar olarak ; kolay kullanım, çizim esnasında yapılan hata ve değişikliklerin kolay düzeltilebilmesi, daha sonra yapılacak değişikliklere imkan vermesi, resim düzlemi olarak kullanılan bilgisayar ekranının kolay takip edilebilmesi ve boyutlarının rahatlıkla değiştirilmesi, 2D ve 3D boyutlu çizimler yapılabilmesi, çizilen parçaların analizlerinin kolaylıkla yapılabilmesi, kolay saklanılabilmesi, diğer programlarla uyumlu çalışabilmesi olarak sayabiliriz (İmrak,1997).

MAKİNA MÜHENDİSLİĞİ EĞİTİMİNDE TEKNİK RESİM

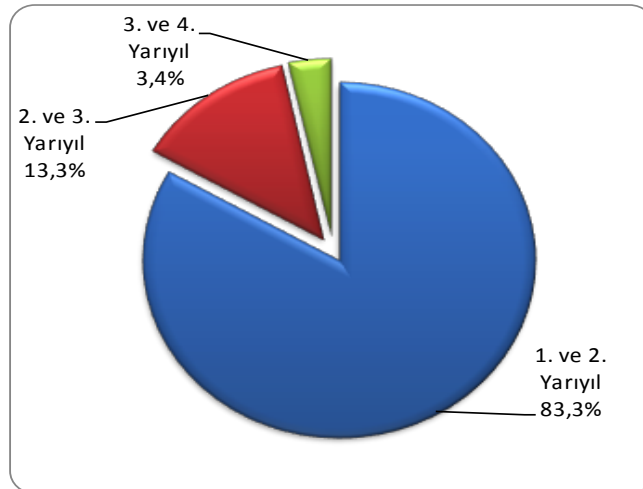
Mühendislik alanında özellikle de makina mühendisliği alanında teknik resim en önemli iletişim aracı olarak kullanılmaktadır. Bundan dolayı imalatçı çalışacak mühendislerin bu konuda yeterli bilgi düzeyinde olması gerekmektedir. Temel mühendislik eğitimin alındığı üniversitelerde bu bilgilerin tam ve uygulanabilir bir şekilde verilmesi hedeflenmelidir.

Avrupadaki üniversitelerde makina mühendisliği eğitim programları incelendiğinde, temel mühendislik dersi olarak teknik resim derslerini görmekteyiz. Bazı üniversitelerde klasik teknik resim yani çizimin elle ve yardımcı araç gereç kullanılarak yapıldığı teknik resim dersi olarak verildiği bazı üniversitelerde bilgisayar destekli olarak verilmektedir. Bazı üniversitede hem klasik hem de bilgisayar destekli olarak her iki ders birlikte verilmektedir. Uluslararası akreditasyon kriterleri göz önüne alınarak Avrupa üniversitelerinde verilen dersin hedefi, öğrencilere teknik resim hazırlama yeteneği kazandırmak, teknik resimleri okuyabilme ve bir veya daha fazla CAD yazılımını kullanmayı öğretmektir. Teknik resim dersi olarak verilen konular incelendiğinde çoğunlukla izdüşüm düzlemleri, cisimlerin görünüşleri, kesit görünüşler, ara kesitler, makina elemanlarının çizimleri ve perspektif resim konularının anlatıldığını görüyoruz. Ders kredisi olarak, çoğunlukla 6 ve üzeri ACTS kredi olarak dersler verilmektedir. Bilgisayar Destekli Teknik Resim derslerinde ise kullanılan programın tanıtılması, temel çizim komutları, düzenleme ve görüntü ayarlama ile yazıcıdan çıkış alma komutları ile katı modelleme için kullanılan komutlar uygulamalı olarak verilmektedir. Genellikle bilgisayar programı olarak AutoCAD, Pro/Engineer, Solidworks ve CATIA programları tercih edilmektedir (Bolat&İmrak, 2001).

4.1. Türkiye'deki Üniversitelerde Teknik Resim Eğitimi

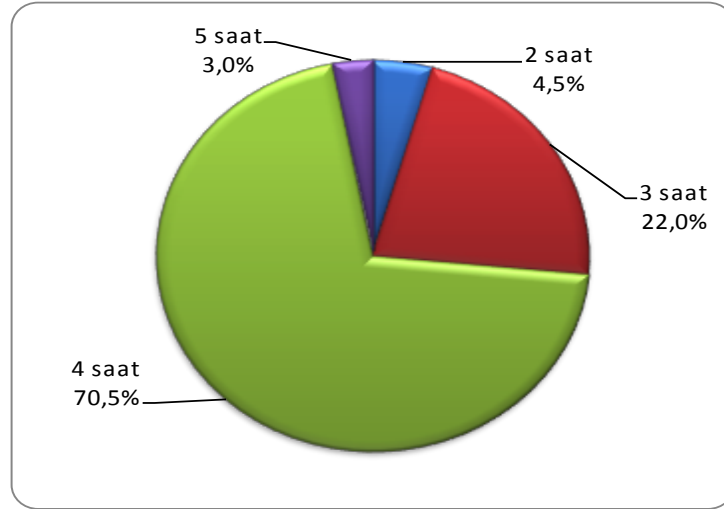
Türkiye'de bulunan üniversitelerin Makina Mühendisliği eğitimi veren bölümlerinde teknik resim derslerinin tüm eğitim prgramlarında temel mühendislik dersi olarak yer almaktadır. Dersler klasik teknik resim, bilgisayar destekli teknik resim ve her ikisinin verilmesi şeklindedir. Çoğunlukla bilgisayar destekli teknik resim derslerinin ağırlıklı olduğunu görmekteyiz. Şekil 2'de görüldüğü gibi teknik resim derslerinin çoğunlukla 1. ve 2. dönemlerde verildiği ni görmekteyiz.

Şekil 2. Türkiye'deki Makina Mühendisliği Bölümlerinde Teknik Resim ders dönemleri

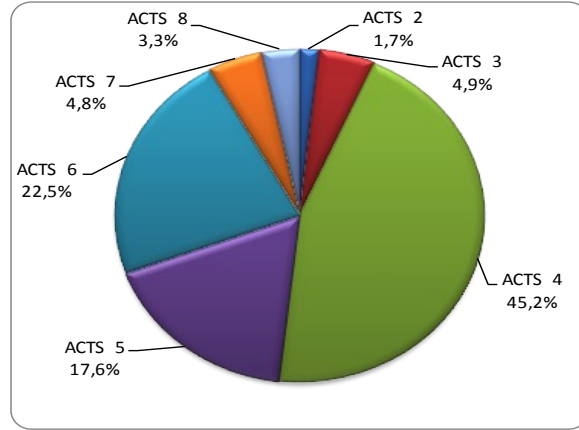


Üniversitelerin Makina Mühendisliği eğitimi veren Bölümlerinde teknik resim derslerine ayrılan kredi saatleri Şekil 2’de verilmiştir. Derslerin çoğunluğunun 4 kredi (2+2) şeklinde yani 2 saat teorik 2 uygulama olarak verilmektedir.

Şekil 3. Türkiye’deki Makina Mühendisliği Bölümlerinde Teknik Resim ders kredileri



Şekil 3. Türkiye’deki Makina Mühendisliği Bölümlerinde Teknik Resim derslerinin ACTS kredileri



Şekil 3’de de Türkiye’de verilen derslerin ACTS kredileri görülmektedir. Şekilde görüldüğü derslerin 45,2%’si ACTS kredisinin 4 olduğu görülmektedir.

.1.1. Teknik Resim Dersi ve Kapsamı

Yıldız Teknik Üniversitesi (YTÜ) Makina Fakültesi, Makina Mühendisliği Bölümünde verilen (2+2) 3 kredilik iki ayrı dönemde Bilgisayar Destekli Teknik Resim I ve II olarak verilmektedir. Bilgisayar Destekli Teknik Resim I zorunlu ders olup, mühendislik eğitiminin ilk yılında öğrenciler almaktadır. Bilgisayar Destekli Teknik Resim I dersinin konuları teknik resimin önemi, standartlar (yazı, çizgi,kağıt ölçek standartları ile çizim kuralları, kağıtların katlanması ve yazı alanlarının anlatılması) temel geometrik çizimler, izdüşüm, ölçülendirme, kesitler ile perspektif resim çeşitleri ve çizim kuralları verilmektedir. Bunlarla ilgili uygulamalar laboratuarda AutoCAD programında yaptırılmaktadır. Tablo 1’de bir dönem boyunca haftalara göre Teknit resim ders planı verilmektedir.

Tablo 1. Bilgisayar Destekli Teknik Resim I ders planı

Hafta	Konular
1	Teknik Resim tanımı,önemi,alet ve malzemelerin tanıtımı
2	Teknik Resim standartları (Yazı, çizgi ve kağıt ve ölçek stadartları)
3	Bilgisayar Programının tanıtılması
4	Bilgisayar Programının tanıtılması
5	Temel geometrik çizimler
6	İzdüşüm ve görünüş çizme kuralları
7	İzdüşüm ve görünüş çizme kuralları
8	I. Yarıyıl sınavı
9	Ölçülendirme esasları
10	Kesit görünüşlerin elde edilmesi
11	Arakesitli görünüşler ve özel görünüşler
12	Yüzey işleme sembolleri
13	Perspektif çizim
14	II. Yarıyıl sınavı
15	Makina elemanları ve çizim esasları

16	Final Sınavı
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YTÜ makina mühendisliğinde seçmeli ders olarak ikinci dönem okutulan Bilgisayar Destekli Teknik Resim II ders planı Tablo 2’de verilmiştir.

Tablo 2. Bilgisayar Destekli Teknik Resim II ders planı

Hafta	Konular
1	Teknik Reim çeşitlerinin tanıtılması
2	Bilgisayar Programının tanıtılması
3	Bilgisayar Programının tanıtılması
4	Boyutsal toleranslar
5	Şekil ve konum toleransları
6	Geometrik toleranslar
7	Geometrik toleranslar
8	I. Yarıyıl sınavı
9	Makine elemanları ve çizimleri
10	Montaj resimleri
11	Montaj için parçaların birleştirilmesi
12	Montaj sıralamasının yaratılması
13	Parametrik modelleme
14	II. Yarıyıl sınavı
15	Kaynak sembolleri
16	Final Sınavı

SONUÇ ve ÖNERİLER

Gelişen imalat ve teknolojiye paralel olarak teknik çizimde kullanılan bilgisayar programları da gelişmektedir. Avrupa’da ve ülkemizde imalat ve tasarım alanında çalışacak iyi eğitilmiş temel mühendislik bilgileri ile donatılmış mühendislere ihtiyaç vardır. Makina Mühendisliği alanında yoğun bir şekilde kullanılan teknik resim aslında bütün mühendislik alanları ve teknik elemanların tarafından sanayide yoğun bir şekilde kullanılmaktadır. Özellikle imalat alanında ve tasarım alanında çalışan teknik kişilerin uluslararası ve ülkemizde kullanılan standartları bilinmesi çok önemlidir. Bu anlamda bakıldığında mühendis eğitimi veren üniversitelerde bu derslerin eksiksiz olarak verilmesi zorunlu bir şarttır. Uluslararası akreditasyon kriterlerine uygun bir şekilde eğitim veren ülkemizdeki bir çok üniversitelerde gelişen teknolojiyi takip eden, çağdaş şartlara uyum sağlayan gerekli bilgi ve donanımına sahip mühendisler yetiştirilmektedir.

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INTE 2014

Conceptual framework of innovation excellence model for higher education institutions

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Abstract

This article presents the conceptual framework of Innovation Excellence Framework for education especially higher education institutions (HEI). Several factors were identified from previous studies through literature study and empirical findings. The original version of Total Performance Excellence Model was used as the main skeleton and its extended model called Value-Based Total Performance Excellence Model (VBTPTEM) as the basis for this framework. Innovation Excellence Framework provides the staff at all level in the university to embark on innovation capabilities endeavor towards improved university performance. Several predictors of performance in the earlier version of TPEM and VBTPTEM model have been regrouped into another viewpoint of university excellence in terms of innovation. Originally, there were 11 factors in the performance excellence model i.e. leadership, culture, objectives and strategy, resources management, change management, innovation values, best practices, employee-focused, stakeholder-focused, productivity-focused and total performance. Eventually, this article blends the available criteria into several sub-categories to give new insights towards empowering the innovation excellence at the HEI. The proposed conceptual framework is also presented.

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Peer-review under responsibility of the Sakarya University.

Keywords: innovation; excellence; capabilities; values

Introduction

Universities worldwide are aggressively embarked on innovation for achieving excellence. This is important for an organization such as higher education institutions (HEI) to empower its role and the innovation capabilities (Ibrahim 2013). This is to prepare the HEI for competing in the educational arena globally. Previously, achievement of HEI is measured through tangible yardstick such as number of research grants secured, number of products produced, number of publications and to name a few. Nowadays, intangible measurement is of great importance. Selznick (1957) pointed out that, for an organization to be institutionalized, it must be infused with values. In addition, the collapses of many giant corporations are due to lacking of embracement of organizational core values by their leaders. Following this, values as the soft performance metric should be given a due consideration. In short, performance measurement system is very vital in an organization (Ab Hamid 2013). Innovation is the important factor for competitive excellence in any organizations (Job & Bhattacharyya 2007)

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including higher education institutions. Thus, university performance should be measured through intangible innovation capabilities that are discussed in this article.

Conceptual Framework

This article discussed the conceptual framework for innovation excellence in HEI. Several factors are determined such as organizational strategy and objectives, resource management, change management, best practices and innovation capabilities. These factors have been discussed in Ab Hamid et al. (2014). For the conceptual model for achieving innovation excellence, all five factors are embedded with intangible performance measures through core values. These core values are the organizational values that are considered the most important that should be visible to all staff in the organization. Mokhtar et al. (2012) discussed thoroughly the core values beneath each constructs. It is believed that there exists causal relationships among the factors understudy and it is beyond the scope of this article. Although, many researches have been conducted on innovation excellence such as Martensen et al. (2007), Job & Bhattacharyya (2007) and Dahlgaard-Park & Dahlgaard (2008), but the model are rather different as proposed in this article. The integration of soft side constitutes an organizational excellence journey (Dahlgaard & Park-Dahlgaard 1999; Dahlgaard-Park et al. 1998; Martensen et al. 2007; Dahlgaard-Park 2012).

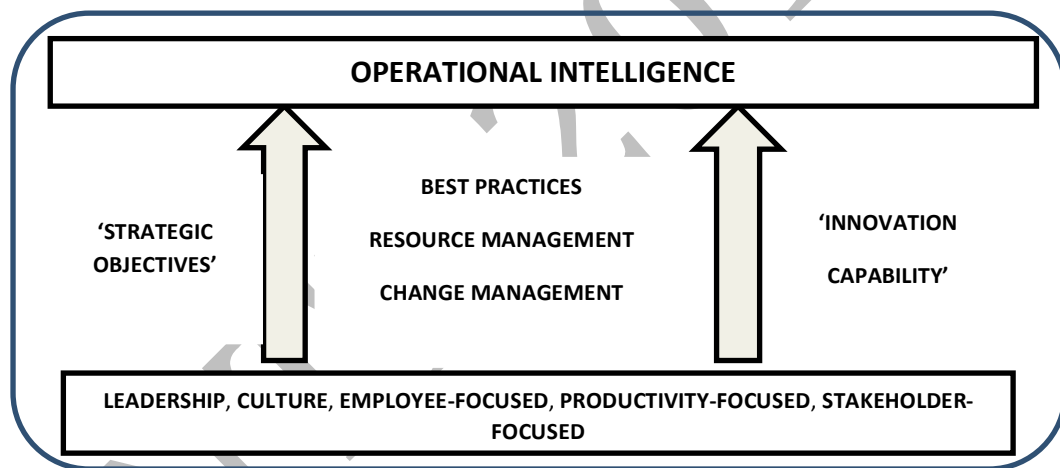


Fig. 1. Innovation Excellence Framework.

The conceptual model in Fig. 1 is a new version of succeeding the innovation excellence by focusing the proposed dimensions and eventually strives and sustain for organizational operational intelligence. The baseline of the model consists of leadership factor, culture, employee, productivity and stakeholder which are the combination of organizational capability and organizational focus (Fazli et al. 2003). In this article, we renamed it to 'organizational roots'. This has been the basis and pre-requisites for organizational excellence. Next, the second group consisted of strategic objectives, best practices, resource management, change management and innovation capability which are part of organizational capability in Fazli et al. (2003). In this article, we grouped this into 'organizational stem and leaf' as the mediator for accelerating towards achieving organizational excellence through capitalizing on innovation capabilities. Finally, the last part is the 'operational intelligence' which is higher than 'excellence'. In this group, the organization is said to be stable and are in the state of excellence. The operation of the organization has achieved the highest level of excellence and the organization has to maintain the excellence over time. Maintaining the excellence is very challenging and yet the organization has to sustain it. Therefore, we classified this as the operational intelligence; as compared to total performance by Fazli et al. (2003) and Mokhtar et al. (2012).

Concluding Remarks

This model is said to be a sustainable model for measuring the innovation specifically and organizational well-being generally, as all dimensions proposed are measured using value-based indicators. This is in line with Martensen et al (2007) who emphasised that innovation should be improved through soft aspects of innovation. Henceforth, organisational core values act as the soft aspect or intangible aspect that upholds the dimensions towards achieving the innovation excellence. The development of sustainable innovation excellence framework is timely as organisations stressed on key performance indicators as a cursor for total organizational success (Dahlgaard-Park & Dahlgaard 2008). Through the proposed framework, the academic institutions could be the managed and geared for a total excellence. This in turn would lead towards accomplishing the sustainable innovation excellence.

Acknowledgements

We would like to thank Ministry of Education, Malaysia for funding this research under ERGS/1/2013/STG06/UMP/02/, FRGS/1/2013/SG04/UKM/02/4 and Universiti Malaysia Pahang (RDU130326).

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Connectivism learning environment in augmented reality science laboratory to enhance scientific literacy

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Abstract

The aims of this research were to: 1) design Connectivism learning environment in an augmented reality Science laboratory to enhance scientific literacy, and 2) evaluate and certify the suitability of Connectivism learning environment in an augmented reality Science laboratory to enhance scientific literacy. The research is divided into two steps: 1) designing Connectivism learning environment in an augmented reality Science laboratory to enhance scientific literacy 2) evaluating and certifying the suitability of Connectivism learning environment in an augmented reality Science laboratory to enhance scientific literacy. The sample consisted of seven experts by purposive sampling. The sample must have relevant experience at least three years, consisting of three experts in Connectivism, two experts in Augmented Reality (AR) and two experts in scientific literacy. The form for evaluating and certifying the suitability of Connectivism learning environment in an augmented reality Science laboratory to enhance scientific literacy was used as a research tool. The mean and the standard deviation were used to analyze data. The results showed that the developed Connectivism learning environment in an augmented reality Science laboratory to enhance scientific literacy is composed of four major components as follows: 1.1) The components of learning environment 1.2) The learning process to enhance scientific literacy 1.3) The characteristics of environment and 1.4) The scientific literacy 2) The nine experts evaluated and certified the Connectivism learning environment in an augmented reality Science laboratory to enhance scientific literacy. The overall suitability was rated as "Most". 2.2) The overall suitability of learning process to enhance scientific literacy was rated as "Most" and 2.3) The overall suitability of characteristics of environment was rated as "Most".

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Peer-review under responsibility of the Sakarya University.

Keywords: learning environment; Connectivism; Augmented Reality; Scientific Literacy

Introduction

Scientific literacy is the ability to use scientific knowledge *to identify questions*, and *to draw evidence-based conclusions* to understand and help make decisions about the natural world and the changes caused by man-made activities (Organization for Economic Co-operation and Development, 2003). According to the results of PISA 2012, Thai students scored 444 in Science which was below average of the Organisation for Economic Co-operation and Development (OECD) and one-third of Thai students (34%) who had got scientific literacy above international average (PISA Thailand, 2013), indicating the competitive character of Thai citizens in the future; therefore, a researcher is interested in studying Connectivism learning environment in an augmented reality Science laboratory to enhance scientific literacy.

Connectivism is a learning theory that describes learning in the digital age (George Siemens, 2006). The learning process based on the theory of learning in the digital age is a loop. Learners will connect to the network to share and find out new information. Then, the learners' beliefs based on new learning will be modified, and be

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linked to the network to share perceptions and search for new information (Rita Kop and Adrian Hill., 2008). Knowledge is distributed across a network encouraging learning to create and access those networks, the connections of the network based on experience and interaction with the learning community (Downes, 2007), which is more important than current knowledge (George Siemens, 2006). The communication between the device and the computer in an environment helps learners learn in an interesting environment (Hye-jin Kim, Ronnie D. Caytiles, and Tai-hoon Kim, 2012).

Connectivism learning environment is defined as an environment that supports and inspires learning through a process of establishing a network linking node or resources, sharing and finding out new information facilitated by technology.

Augmented Reality (AR) is one type of Virtual Reality (VR). The Virtual Reality (VR) is technology allowing users to be in a completely synthetic environment. The users cannot see the surrounding real world of the users. In contrast, the Augmented Reality (AR) allows the users to see virtual objects superimposed on the real environment (Ronald T. Azuma, 1997). The study of results of augmented reality application outside a museum of To Go Science Center shows that the augmented reality application has the potential to be used in school environments. The students who are interested in the augmented reality application and try to use the program of augmented reality application are able to understand more science contents (Yelva C. Larsen, Hagen Buchholz, ConstantinBrosda, Franz X. Bogner, 2011).

Siemens, G. and Tittenberger, P. (2009) suggested that learning activities are experimental activities with interaction emphasising on solutions. Knowlton (2003) insisted that the Problem-Based Learning (PBL) is a pedagogy in which students learn about a subject through problem-solving activities. The learning process based on using problem-based learning. 3C3R is a systematic approach designed specifically to guide instructional designers and educators design learning by using problem-based learning effectively for all levels of students (Hung, W., 2006). The 3C3R is composed of two elements; that is, the main component and the process component. The main component consists of the content, context and connection. The process component supporting the main component consists of researching, reasoning and reflecting relating to the thinking process of learning and problem solving skills.

Research Objectives:

to design Connectivism learning environment in an augmented reality Science laboratory to enhance scientific literacy

to evaluate and certify the suitability of Connectivism learning environment in an augmented reality Science laboratory to enhance scientific literacy

Research Objectives

.1. Population and sample:

Population is experts in Connectivism, experts in Augmented Reality (AR) and experts in scientific literacy. The sample consisted of seven experts by purposive sampling. The sample must have relevant experience at least three years, consisting of three experts in Connectivism, two experts in Augmented Reality (AR) and two experts in scientific literacy.

Research Methodology was divided into 2 phases as follows:

.1. Phase 1 The steps of designing Connectivism learning environment in an augmented reality Science laboratory to enhance scientific literacy as follows:

Doing a review of related literatures on the learning environment and Connectivism to determine the Connectivism learning environment in an augmented reality

Doing a review of related literatures on a Science laboratory and augmented reality to determine an augmented reality Science laboratory

Doing a review of related literatures on Science learning

Developing the components and characteristics of Connectivism learning environment in an augmented reality Science laboratory to enhance scientific literacy

Proposing Connectivism learning environment in an augmented reality Science laboratory to enhance scientific literacy to an advisor to consider it and then get developed upon the advisor's recommendation

.2. *Phase 2* The steps of evaluating the suitability of Connectivism learning environment in an augmented reality Science laboratory to enhance scientific literacy as follows:

Creating a tool for evaluating the suitability of Connectivism learning environment in an augmented reality Science laboratory to enhance scientific literacy

Proposing the developed Connectivism learning environment in an augmented reality Science laboratory to enhance scientific literacy to seven experts to consider and evaluate appropriate the suitability

Developing the Connectivism learning environment in an augmented reality Science laboratory to enhance scientific literacy

Presenting the developed Connectivism learning environment in an augmented reality Science laboratory to enhance scientific literacy in a conventional illustration essay

Analyzing the results of evaluating the suitability of Connectivism learning environment in an augmented reality Science laboratory to enhance scientific literacy by using the mean (\bar{x}) and standard deviation (SD) , which is the criteria for determining the weight of assessing the appropriateness of the activity for 5-point Likert scale

Research Results

This research results were classified into two phases as follows:

.1. *Phase 1* The component and characteristics of Connectivism learning environment in an augmented reality Science laboratory to enhance scientific literacy presented in Fig. 1.



Fig. 1. Connectivism Learning Environment in Augmented Reality Science Laboratory to enhance Scientific Literacy.

The developed Connectivism learning environment in an augmented reality Science laboratory to enhance scientific literacy consists of four main components as follows: 1) the component of the learning environment, 2) the learning process to enhance scientific literacy, 3) the characteristics of environment, and 4) enhance scientific literacy.

1) The components of Connectivism learning environment in an augmented reality Science laboratory to enhance scientific literacy comprises of five components as follows: 1.1) Learners refer to high school students, a single node and each learner as a point of information with personal knowledge based on unique experiences, feelings, opinions of each learner and the goal of each learner is to expand personal knowledge by linking to other node. 1.2) Facilitators refer to how teachers to be flexible depending on the context and the response to the diverse needs of learners. The teachers acted as a member of the group. The teachers allow students to use their creativity and try to figure out on their own. While the teachers were providing advice for the students, the students can find the answers and the teachers acted as advisors. 1.3) The content refers to current Science contents in high school including connecting and appropriate context 1.4) AR Lab refers to a science experiment using augmented reality to take advantage of Science learning through an augmented reality Science laboratory enabling the students to understand Science concepts,. Science inquiry skills, problem-solving skills, collaborative work skills, and attitudes toward Science 1.5) Network refers to connecting between nodes both in the classroom and outside the classroom with wireless networking to learn about social interaction and collaboration via social media.

2) The learning process to enhance scientific literacy is composed of three components as follows: 2.1) Researching refers to the process of understanding the problem by searching for the necessary information leading the students to learn the intended contents according to purposes 2.2) Reasoning refers to the process of promoting the knowledge application through the research and the development of problem-solving skills and 2.3) Reflecting refers to the process by which learners present their knowledge throughout the learning process.

3) The characteristics of Connectivism learning environment in an augmented reality Science laboratory consists of four components as follows: 3.1) Stimulating learning by acting on their own (Hands-on experiment) by using various knowledge to achieve Science inquiry skills, problem-solving skills and understanding of Science concepts 3.2) Stimulating with collaboration to achieve collaborative skills by connecting the network to continue sharing knowledge and achieving new information. 3.3) Flexibility to meet the needs and abilities of learners to inspire to learn by using technology to facilitate learning leading to the attitude towards Science 3.4) Connecting knowledge with others both in the classroom and outside the classroom (Connection) to create a community learning network, to continue learning and understanding the Science concepts.

4) Scientific Literacy: Individuals with scientific literacy has 4 factors as follows: 4.1) Understanding of Science concepts and principles 4.2) Using their Science knowledge to define questions and use the scientific method to solve problem 4.3) Being able to integrate Science, Mathematics and technology in their daily lives 4.4) Being aware of the diversity and unity in nature.

.2. *Phase 2* The results of evaluating and certifying the suitability of Connectivism learning environment in an augmented reality Science laboratory to enhance scientific literacy

Evaluating and certifying the components and characteristics of Connectivism learning environment in an augmented reality Science laboratory to enhance scientific literacy by nine experts are as follows:

Table 1. The results of evaluating the components of learning environment

Details of Components	\bar{X}	S.D.	Suitability
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1.1 Learner	4.71	0.49	Most
1.2 Facilitator	4.57	0.53	Most
1.3 Content	4.71	0.49	Most
1.4 AR Lab	4.71	0.49	Most
1.5 Network	4.71	0.49	Most
Overall Scoring	4.69	0.06	Most

Table 1 shows the components of learning environment. The experts rated the suitability of components of learning environment as “Most” ($\bar{x}=4.69$, S.D. = 0.06). The suitability of learner, AR Lab, and network was rated as “Most” ($\bar{x}=4.71$, S.D. = 0.49). The suitability of facilitator was rated as “Most” ($\bar{x}=4.57$, S.D. = 0.53).

Table 2. The results of evaluating the learning process to enhance scientific literacy

Details of Process	\bar{X}	S.D.	Suitability
2.1 Researching	4.43	0.53	Much
2.2 Reasoning	4.57	0.53	Most
2.3 Reflecting	4.71	0.49	Most
Overall Scoring	4.57	0.14	Most

Table 2 shows the learning process to enhance scientific literacy. The experts rated the suitability of learning process to enhance scientific literacy as “Most” ($\bar{x}=4.57$, S.D. = 0.14). The suitability of reflecting was rated as “Most” ($\bar{x}=4.71$, S.D. = 0.49). The suitability of reasoning was rated as “Much” ($\bar{x}=4.57$, S.D. = 0.53). The suitability of researching was rated as “Much” ($\bar{x}=4.43$, S.D. = 0.53).

Table 3. The results of evaluating the characteristics of learning environment

Details of Components	\bar{X}	S.D.	Suitability
3.1 Hands-on experiment	4.71	0.49	Most
3.2 Collaboration	5.00	0.00	Most
3.3 Flexibility	4.71	0.49	Most
3.4 Connection	4.89	0.38	Most
Overall Scoring	4.82	0.14	Most

Table 3 shows the characteristics of learning environment. The experts rated the suitability of characteristics of learning environment as “Most” ($\bar{x}=4.82$, S.D. = 0.14). The suitability of collaboration was rated as “Most” ($\bar{x}=5.00$, S.D. = 0.00). The suitability of connection was rated as “Most” ($\bar{x}=4.89$, S.D. = 0.38). The suitability of hands-on experiment and flexibility was rated as “Most” ($\bar{x}=4.71$, S.D. = 0.49).

Table 4. The results of evaluating the characteristics of individuals with scientific literacy

Details of Components	\bar{X}	S.D.	Suitability
4.1 Understanding of Science concepts and principles	4.71	0.49	Most
4.2 Using their Science knowledge to define questions and use the scientific method to solve problem	4.71	0.49	Most
4.3 Being able to integrate Science, Mathematics, and technology in their daily lives	4.71	0.49	Most
4.4 Being aware of the diversity and unity in	4.00	1.00	Much

nature			
Overall Scoring	4.54	0.31	Most

Table 4 shows the characteristics of individuals with scientific literacy. The experts rated the suitability of characteristics of individuals with scientific literacy as “Most” ($\bar{x} = 4.54$, S.D. = 0.31). The suitability of understanding of Science concepts and principles, using their Science knowledge to define questions and use the scientific method to solve problem, and being able to integrate Science, Mathematics, and technology in their daily lives was rated as “Most” ($\bar{x} = 4.71$, S.D. = 0.49). The suitability of being aware of the diversity and unity in nature was rated as “Much” ($\bar{x} = 4.00$, S.D. = 1.00).

Table 5. The results of evaluating the environment towards practical application

Details of Components	\bar{X}	S.D.	Suitability
5.1 Components of Connectivism learning environment in an augmented reality Science laboratory is practical.	4.43	0.53	Much
5.2 The learning process to enhance scientific literacy is practical.	4.71	0.49	Most
5.3 Characteristics of Connectivism learning environment in an augmented reality Science laboratory is practical.	4.57	0.53	Most
5.4 Connectivism learning environment in an augmented reality Science laboratory to enhance scientific literacy practically.	4.43	0.79	Much
Overall Scoring	4.54	0.14	Most

Table 5 shows the environment towards practical application. The experts rated the suitability of the environment towards practical application as “Most” ($\bar{x} = 4.71$, S.D. = 0.49). The suitability of practical characteristics of Connectivism learning environment in an augmented reality Science laboratory was rated as “Most” ($\bar{x} = 4.71$, S.D. = 0.49). The suitability of practical components of Connectivism learning environment in an augmented reality Science laboratory was rated “Much” ($\bar{x} = 4.43$, S.D. = 0.53) and the suitability of Connectivism learning environment in an augmented reality Science laboratory to enhance scientific literacy practically was rated as “Much” ($\bar{x} = 4.43$, S.D. = 0.79).

Discussion

The discussions of results are as follows:

6.1 Being evaluated and certified the components of Connectivism learning environment in an augmented reality Science laboratory to enhance scientific literacy and the learning process to enhance scientific literacy by the experts indicated that the overall scoring was rated as “Most” in conformity with Catherine Lombardo (2014) who addressed that a learning environment is a deliberately curated collection of resources and activities for learning related to a specific development need are as follows: 1) Resource of learning environment is composed of five components as follows: 1.1 (Learner 1.2) Facilitator 1.3) Content 1.4) AR Lab and 1.5) Network and 2) activities for learning consists of three components as follows: 2.1) Researching 2.2) Reasoning 2.3) Reflecting which are the components of process of 3C3R model (Hung, W., 2006).

Connectivist teachers adopt the roles of facilitator, mentor, critical colleague and sometimes instructor as appropriate (Christine Armatas, Christine Spratt and Andrew Vincent, 2013). Connectivist teachers assist their learners to alter their existing knowledge while facilitating the learners to move beyond their knowledge by establishing connections to other people (Starkey, 2010). Connections change content. Content is imbued with new meaning when situated in network (George Siemens, 2006).

6.2 Being evaluated and certified the characteristics of Connectivism learning environment in an augmented reality Science laboratory to enhance scientific literacy by the experts indicated that the overall

scoring was rated as “Most” in conformity with Ed Smeets (2004) who insisted that the four characteristics of effective learning environment are as follows: 1) rich context and tasks that are as authentic as possible are provide to present link to the word outside school, 2) active and Independent learning is stimulated, 3) co-operative learning is stimulated, 4) the curriculum is adapted to the needs and capabilities of the individual learners.

6.3 Being evaluated and certified the characteristics of individuals with scientific literacy by the experts indicated that the overall scoring was rated as “Most” in conformity with American Association for the Advancement of Science (1989) who also defined a scientifically literate person as “...one who is aware that science, mathematics, and technology are interdependent human enterprises with strengths and limitations; understands key concepts and principles of science; is familiar with the natural world and recognizes both its diversity and unity; and uses scientific knowledge and scientific ways of thinking for individual and social purposes...”.

Recommendations

7.1 Recommendations for using the results for schools providing the components of Connectivism learning environment in an augmented reality Science laboratory to enhance scientific literacy prepare the components to manage the learning process.

7.2 Recommendations for future research; the characteristics of Connectivism learning environment in an augmented reality Science laboratory to enhance scientific literacy should be developed for studying the results of providing the characteristics of Connectivism learning environment in an augmented reality Science laboratory.

Acknowledgements

I would like to express my special appreciation and thanks to all the experts for giving their evaluation on Connectivism learning environment in an augmented reality Science laboratory to enhance scientific literacy. I also would like to thank Kasetsart University Laboratory School Center for Educational Research and Development and King Mongkut's University of Technology North Bangkok for its great support for this research.

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INTE 2014

Contemporary issues of teaching from the viewpoint of students

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Abstract

The paper monitors and compares the results of sociological research, which took place in Slovakia at primary and secondary schools among pupils and students through the Agency for research and development. Representation of respondents were very diverse and they responded in large numbers to the current problems of the Slovak education today, as shown by a more detailed analysis of individual issues.

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Peer-review under responsibility of the Sakarya University.

Keywords: current issues; teacher; student; research;

1. Introduction

Sample responding to the above issues in each area was represented almost equally in terms of sex, age and residence of the school. I suppose that the issue of education and the tasks associated with it should first solve the Education Department headed by Minister of Education and experts who should know very well the situation in their field. But the reality is often different because nearly every election is changing the politics and therefore, it happens that they change the laws to their own political ambitions.

From a sociological research follows that the most pressing questions heading are those that concern the very relationship between teachers and pupils/students. We were interested, therefore, whether, for example, most teachers perceive pupil/student as a person worthy of respect and accept their rights and respects the views presented in class if they are in accordance with generally desirable and applicable standards in society, whether they pay the teachers outside the classroom as willing or unwilling, especially if a student comes to them outside the classroom. It happens that teachers in mutual communication with pupils/students are reluctant or even sometimes verbally humiliate them or make them laugh. On the other hand, some pupils/students behave indecently towards teachers, insult them or threaten them. These negative symptoms then often lead to physical manifestations of violence, pupils'/students' aggression against teachers and they recourse beyond physical punishment. It is expected from the teachers that they should be a role model in behavior and action. Is that so? Does teacher decide on legitimate needs and demands of pupils/students fairly? Does teacher solve problems in school according to the ethical rules and principles, not only in relation to the pupils, but also to their colleagues or parents? How is it with bribery in the current primary and secondary school? If respondents answered yes, what reason has led them to do? Does superior deal with such cases?

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2. Sociological research

Let us take a closer look at the results of the sociological research. As I have indicated in the introduction, the total number of respondents is 1768, the students attending primary and secondary schools. In the mentioned research 981 (55.5%) girls and 787 (44.5%) boys were participated. Due to their age, 45.3% of students were aged 11-14 years and 54.7% of students were aged 15-18. Most respondents - 31.1% came from schools whose residencies are located in towns with populations from 20,000 to 50,000. In second place - 27.5% were placed the students, whose school is located in towns of over 50,000 inhabitants. Next in order there are students whose school is located in a village - 17.3%; 13.5% of respondents are from the schools in the towns to 10,000 inhabitants, and in the last place were students - 10.7%, which the school is located in towns with 10,000 - 20,000 inhabitants. More than half of the total number of respondents - 59.8% belonged to the pupils of the 2nd stage at primary schools, 20.1% of respondents were students of secondary vocational schools, 9.8% of respondents were the students at grammar school, 8.7% of respondents were from business academies and 1.6% were from other types of schools (Secondary Art School or they did not present their type of school). Whether respondents were pupils and students with good educational and teaching results suggest the following questions concerning the average marks for their final certificates and relevant to their attendance. 37.8% of respondents said that their average marks for the last report card was in 1.5; 29.9% of the total had average marks for the last report card in 2.0; 25.4% of students for the last report card reached average marks in 3.0 and 6.8% of respondents above 3.0. Regarding schooling, and in particular the number of unexcused hours, 72.9% of pupils and students reported that during the previous school year had unexcused 0 hours, 12.6% of respondents had to 10 unexcused hours, 6.9% had during the previous school year to 35 unexplained absence, 4.8% to 70 hours and 2.8% over 70 hours.

The education sector belongs to one of those, which are often in the media connected with the negative aspects associated with corruption, or bribery. Therefore, we investigated the respondents, whether they were at school in a situation that offered to teachers any gift from a variety of reasons? 39.3% of them said approvingly, about the same number - 39.2% did not offer any gifts, and 21.5% has no opinion on this issue clearly. Following these answers we offered to respondents the voluntary question about the causes of a particular provision of a bribe at school, i.e. if they offered some teachers a gift and they would like to comment, they should indicate the reason for the bribe provide. I will give some interesting findings. For example, to improve assessment of 60.1% (712) of respondents certainly have not offered the gift, but 12.3% (146) of respondents definitely offered a gift, and 13.2% were deterred from the issue. For the good reviews and helpfulness the highest percentage of respondents - 32.8% did not present certainly, but rather yes 25%; and 19.8% certainly offered a gift. The reason for a donation was also affected by a decision in favor of another teacher of the pupil/student. 8.8% of them certainly gave the gift and 7.3% rather yes, while 16.5% this question refused to comment, but it is gratifying that 58.5% certainly did not offer no bribe in this situation.

Another series of questions touched requirements of teachers to pupils and students, their mutual relations between teachers and pupils/students, their mutual communication, behavior and conduct, and the like. The argument that teachers know the extent appropriate and meet the academic requirements and demands of pupils/students previously agreed 31% of respondents. And 29% did not respond to this question, 26.1% strongly agreed, 8.9% disagreed and definitely rather 5% of respondents disagreed. The question of whether teachers are dedicated to pupils/students beyond their obligations - 29.3% did not take a clear position, which I think is quite a high percentage. 24.3% tend to agree, definitely agree with this statement 18.2% and like 18% of respondents rather disagree, 10.2% definitely disagree with this statement. Petlák and also the other authors emphasize that the teacher should be putting into the thoughts and actions of their students, to influence their behavior by empathic approach. It should be borne in mind that students will not teach only by direct action, but by whole his personality, his/her relationship to work, to the students and the like. Promoting the humanization of education and training the teacher should contribute to eliminate fear in the learning process. If the teacher will accept their students as equal partners, where students will see that the teacher cares about them, wants to talk to them, wants to help them in their personal worries and problems, if they will lead informal discussions on a number of current and global issues of humanity, then he/she will be able to achieve success. An important factor in the relationship teacher - pupil is the motivation, which may include appropriate understanding, helping others, satisfaction of achieving the objective, which is to help students in education, develop their opportunities, skills and personal

maturity (Petlák, 2000; Ondrejkoš & Verešová, 2003).

In many professional literature we read that the teacher should be the patterns for pupils/ students in all, most of it in the behaviors and actions. The respondents replied to the question whether their school teachers are the model in the behaviors and actions for them. The results of their responses were varied, but not unique with the high percentage for a clear answer, which therefore suggests that in this area the teachers still have something to rectify themselves, but also the faculty preparing their students for future teaching profession. Most respondents - 26.2% did not respond clearly to that argument, 24.4% tend to agree with this statement, 19.1% strongly agree and 13.9% rather disagree. Warning sign should be that 16.4% of respondents with this statement definitely disagreed, this means that the teachers are not models for them in how they behave and act. In the present context may be recalled that with the teachers, but also workers in other areas who are more and more frequently to the public on the eyes, and it is possible to monitor signs of bending, breaking, as well as consolidation of characters, speeches cowardice, undercutting, but also sober rational thinking, courage, dignity and proud citizenship Matej Beňo says that through management education authorities, laws, decrees, regulations, instructions linked to economic security through salary practices, bonuses and other benefits could be controlled and guided teaching obedience (Beňo, 2001).

Many consider that teachers are only responsible for the actions and behavior of pupils/students in school buildings. How is perceived this issue by the respondents? Is the action and moral behavior of these moral subjects important outside of school? 36.4% of respondents strongly agreed and 26.8% rather agreed with the statement that the action and behavior of teacher and pupil/student is also important outside of school. 16.7% of them did not know the answer for this issue and 11.2% of respondents rather disagreed or 8.9% strongly disagreed with that argument. If we closer notice the behavior and actions of teachers, in this context, we should compare the teaching profession to others that differs peculiarly, for example, that the teacher does not act only by word (compared, for example the career of a judge), some body (some manual occupations) but he/she operates with the summary of all features, his/her whole conduct and behavior, not only in school but also outside of school, in public, private and family life (Štefanovič, 1967). One can agree that the teaching profession is different and following his own, as I think that we should say the same also about many other professions, because each of them has its particularity. But I do not share the view that the teacher only because he/she is the teacher must behave so well in the private home environment. I am not saying that he/she would behave somehow differently in public or in private, where his/her words are differed with action. But I feel as if the maximalist demands were placed on him outside the school, while moral perspective on matters such as equal access to all morally mature adults is denies. Also, from the perspective of professional ethics, in this case the ethics of teaching the request for his all-out bondage profession cannot be accepted. The teacher is still a teacher at school or at school events, which can take place outside of school and outside of the classroom, but the subordination of all-out profession cannot be expected and required from him in any case. After all, consider how many of those professions would you find where the concerned person should behave well at work and at home, for example, in a family environment, in the circle of his closest? Why should a teacher be a teacher at home? If they have a family in the first place they should be parents.

For discussion is also reasoning about how the teacher should maintain to pupils/students if they need advice and help. A variety of answers were also recorded to the question whether some teachers are in relation to pupils/students unwilling, especially if a student comes to them outside the classroom. Therefore it can be assumed that this is a dilemma which would need to be clearer stance on school work rules. I believe that it is not clear for teachers as well as for pupils/students. Suggest that the respondents' answers to the questionnaire, where one quarter - 25.3% to that question did not know clearly expressed, 24.2% of respondents disagreed rather and 16.9% strongly disagreed with this statement. On the contrary to this claim rather agreed 18.3% and 15.4% of respondents strongly agreed. The diverse responses are evidence that the future will be given to the clarification of such ethical dilemmas, order to prevent misunderstandings and confusion of relations between teachers and pupils/students or the teachers themselves. I suppose that clarifying the issues will be strengthen the relationships among teachers, because even when the answer interviewed were more pronounced, yet one third to it stated rather not clear or negative. Maybe even some teachers do not seem, but students are very much conscious of their actions, and how they treat each other. The argument over whether relationships between teachers are good rather

agreed 34.7% and strongly agreed 32.2% of respondents. 22.5% to that question did not know take a clear position, definitely disagreed 5.8% and 4.9% of respondents rather disagreed.

I drew attention to the direction given that teachers are coming at school and out of it into contact with the parents of their pupils/students. Do they take them as equal partners, or treat them haughtily, or what kind of relationship is among the parents and teachers? As regards the relationship of teacher and parent it should be aware that a parent is morally equal partner on issues of teacher's education of his child, so teacher should always respect this fact. Therefore, the teacher should approach to the parents with the dignity and respect they are entitled to. On the other hand, you also need to realize that during lessons teacher represent parents in their educational function, so the parents should respect the views and opinions of teachers to their children, with the result should be a mutual cooperation between teachers and parents in the process of education. Thus, ethical and moral dimensions are based on the relationship of the teacher to the family or the parents themselves. We investigated the opinion of the claim that some teachers behave inappropriately to the parents in one of the questions dealing with this problem. On the one hand the answers of most respondents are commendable, because with this statement 40.4% strongly disagree or 25.7% rather disagree. On the other hand, it is to ponder, when almost a third of respondents have different opinion to the question. In this respect, teachers do not represent a pattern of moral behavior and action in the profession. It is showed that even in these matters we need to prepare teachers for future careers and to emphasize to students that parents are equal partners for them. Of that group nearly a fifth of respondents (19.9%) did not know take a clear position and to assess the behavior of teachers to parents, but more striking is that 7.2% of respondents strongly agreed with the statement that parents behave inappropriately to parents or 6.8% rather inclined towards this version. The relationship between parents and teachers often have the opportunity find out from the mass media, especially the publicized cases where a parent does not hesitate even physically attack the defenseless teacher.

I believe that teacher interaction with parents is an important part of bilateral relations. Teacher should be an acceptable partner not only for parents but also other professionals (psychologists, physicians), which comes into contact in order to develop the personality of their students. Not every teacher is aware of the interrelatedness of the pupil with the family from which they come. He/she realizes that, as the Marta Černotová noted until they are confronted with the problem "case" – bad student's performance, truancy and substance abuse, grief and theft, teenage pregnancy, student or schoolgirl of primary school. Realize the complexity of the relationship student - family - school up to problem the phenomenon is too late. Nowadays, children often do not appreciate parents, denying them the right of interference in "their things". They are beyond control, sometimes explicitly terrorize the whole family. The question is whether, in the case of a problem child in school, out of school, it is just the family for the child place providing warmth, confidence, emotional shelter. If the parents are too indifferent, they did not dive to their child enough of feeling, attention, or control. Children in these families may experience behavioral problems (Černotová, 1994).

Therefore, we wonder how pupils/students have expressed to question, when some parents verbally or physically attacked a teacher (verbally threatened and attacked him). That argument 55.9% certainly disagreed and rather disagreed 20%. However, a quarter of respondents to this question have a different opinion. Some of them - 15.8% did not know answer clearly, but 5% (88) rather agreed with that argument and 3.4% (60) of respondents definitely recognize such cases. It can be assumed that if parents do not hesitate to threaten the teacher, such barriers do not even have their children. Then, aggression and violence manifests itself in relation of children to their teachers. I think that the problems (particularly ethical and moral) for the common solution between teachers and parents were added. But also often lack of parents' interest about their child. Then the teacher's work is more difficult, mainly if they have no support from the parents of children or adolescents.

3. Conclusion

In the introduction I stressed that the Minister of Education is responsible for the situation in which there are its corresponding institutions. Currently, as even positive action are the initiatives of *Teacher 2020* and the invitation of the Minister of Education, to the public debate. The aim was to discuss the key points of its report, covering topics of teacher and point out the right solutions and problematic parts. One of the main tasks was even

statement of fact what we need to do to our children to have good teachers, because the key to a better education for pupils/students is a good teacher. According to several findings this is the most important factor of quality of education in schools. However, the future will show what will be the impact of their activities and whether teachers will have enough strength to address current and most pressing issues.

Acknowledgements

This paper is supported by KEGA, contract No. 013TUKE-4/2012 „Application of E-learning in Foreign Language Teaching at the Faculty of Manufacturing Technologies.“

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Contemporary parents as the first teachers of media literacy: situation of the Czech family

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Abstract

The paper deals with the importance and the situation of education in the environment of contemporary family and is focused on the problems of media literacy. With regard to the private space of contemporary families we try to look at what happens in today's Czech households with children in the age 6 - 17. Therefore, we show the data from our quantitative survey made among the Czech families (sample 962 parents). Our results showed the relatively high level of regulation and monitoring in the Czech families. Surprisingly, the better media saturated families expressed the lower tendency to regulate their use.

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Peer-review under responsibility of the Sakarya University.

Keywords: media; parental monitoring; education; Czech Republic

Introduction

Importance of the early socialization and importance of family education has been discussed by many scholars for many years. It is evident, that despite the changing forms of family structure, of a family life style and family relationships, family is still important for the children and their socialization. Family gives children the feeling of belonging which is highly important for their social relationships and creation of identity (e. g. Trisha & Nigel, 2005). Positive and self-fulfilling relationships in the family affect many other social relationships of children and help them to cope better with different influences in their social environment (Loudová & Michek, 2014). The changing family environment has been pointed out especially in last decades where the growing number of new modern electronic media has also appeared in families and households (e. g. Livingstone, 2002, Watkins, 2009, Jenkins, 2009, Turkle, 2011, Vittrup et al, 2014). These scholars mention the "media-rich homes" and the specifics of each type of media that have affected also changes in family life style and communication. They indicate the decline of "street culture" and the rise of the media-rich homes and privatisation of the media consumption. What have been also pointed out are changes concerning the location of media in the households. With the multiplicity of media in the family environment there occurs so called "bedroom culture" which describes the movement of televisions, computers, etc. to the private rooms in the households. This change means also the more and more growing privatisation of media use among the children and decreasing social control of their parents. Hagen (2007, 372) reflects that "Children's bedrooms become an arena where they can use media according to their own preference, and thus express more individualized lifestyles. The home increasingly becomes a place of living together, but separately. Parents' regulation becomes more difficult the more media technologies children have in their own separate chambers."

This, but not only, could be seen as one of the basic reasons for the rising importance of media education. According to the development of various media tools educationalists have evolved theory concerning new literacies and multi-literacies (Coiro, Knobel, Lankshear & Leu, 2008; Jenkins, 2009, Kress, 2003, Martin & Madigan, 2006). The contemporary discussion and research are concerned not only on the media literacy, but also on the digital and information literacy that should coexist in the mutual harmony (e.g. Burešová, Havigerová

& Šimíková, 2012, Havigerová & Haviger, 2014, Koltay, 2011). Traditional literacy is taken as the ability to read and write in the shared language of a culture (Hague & Williamson, 2009). Multi-literacy theory suggests that there is a plurality of literacies; different technological platforms and environments may require different constellations of literacy skills (Cope & Kalantzis, 2000). Digital literacy can be defined as “critical thinking in the context of technology use”, of which there are two components: “digital skills and critical thinking skills” (Newman, 2008, 5). Digital literacy is linked with the goal of social participation: “the knowledge, skills and understanding that are required to be involved socially, culturally, politically, and economically in everyday life” (Hague & Williamson, 2009, 3).

Jenkins (2009) mentions media education and necessity to support the media literacy in three core points. The first is that children and young people have a different access to new media technologies and the opportunities for participation they represent. He calls it “participation gap”. Second, he shows how the young generation is unable to distinguish between commercial interests in the media content and format and real facts without them. The third core point of Jenkins is the ethics challenge. Jenkins speaks about one important goal of media education that would encourage young people to become more reflective about the ethical choices they make as participants and communicators and about the impact they have on others.

The growing body of literature on parental mediation of digital media suggests that parents implement more diverse strategies face to face the new media technologies in their homes. E. g. research on parental mediation focusing on children’s television viewing in last decades (Nathanson, 2001; Valkenburg et al., 1999; Warren, 2005) has identified three styles of mediation: restrictive mediation, co-viewing and instructive or active mediation. Restrictive mediation refers to limiting the amount of a child’s viewing time and forbidding a child to watch certain programs. Co-viewing involves sharing the media experience with children and watching together without critical discussion. Instructive mediation (i.e. active mediation) refers to parent–child discussions about television programs so as to stimulate the child’s critical thinking and understanding.

Unfortunately there has not been enough research on this topic in the Czech Republic yet. Even if the situation about the media education at schools is topical for many years, there has not been given enough attention to the situation in our families. The only exception was the project “Situation of the media literacy in the Czech Republic” (Cebe, Jiráček, Trampota & Wolák, 2011) that focused not only on the family situation but also on the overall state in the Czech population.

Methods

The data presented in this text are based on our research made among the Czech families with children aged 6 – 17 in the year 2012. Our sample included 962 parents, 523 mothers and 439 fathers. Most of our parents were in the age 30 – 39 (56,7%) and 40 – 49 years (35,1%). We asked them about their possession and use of various media equipment, about the habits that were connected with them and the regulations from the parents’ side. Furthermore, our task was to find out the attitudes of contemporary parents towards the media in family, feelings of responsibility, methods and educational tools they usually use to form their children’s activities and behaviour in the media environment.

Table 1. Education of parents in the sample.

Education	%
Grammar school	1,9
Qualified	21,6
Secondary school with A-level	44,7
Higher education – Follow-up study	5,3
University education	26,5
Together	100,0

For data collection we used self- administered questionnaires and we tried to catch both parents in our families. Unfortunately it was not always possible, either because one of parent does not live with the family, or he/she was too busy or did not want to answer. By collecting of our data we could also observe some feeling of privacy by

parents connected with our topic. Some parents expressed a reluctance to answer our questions or felt surprised to be asked by them. In this text, there are analysed issues concerned to the following questions:

- What do parents think about importance of regulations of media use and media monitoring in family?
- What do they usually do to develop the media literacy of their children? What is the usual family media practice?
- Who is the person in the family who decides about the rules? How much is this the result of some family negotiation? However, is there any space for changes in the rules?

Results

The data from the Czech Statistical Office (CSO) and our data alike support the image of the Czech families as of media-rich homes. CSO (2013) shows that there were 92% of households with children that were equipped with a PC, 39% from them had at least two PCs, 91,5% of families with children had an access to the Internet in the Czech Republic. In our sample we could find a similar situation. Nearly 99% of household was equipped by a television, in 59% there were two or more devices in a household. In 97,5% household was possible to find PC, in 58% of them in two or more times (Table 2). 97% of families had an access to Internet. Other digital media occurred in families in lower frequency, but were present in some way.

Table 2. Equipment of households by particular types of electronic media (in %).

How many times do you have subsequent electronic devices at home?	0	1	2 and more
Television	1,5	39,1	59,4
Personal computer	2,5	39,5	58,0
DVD player	12,6	69,2	18,2
VHS player	56,7	41,5	1,8
Game console	76,7	18,9	4,4
E-book	96,3	3,1	0,6
iPod	91,0	8,1	0,9
Tablet	93,6	6,2	0,2
Mobile phone	2,0	2,4	95,6
Smartphone	83,8	10,1	6,1

In 55% of families was declared, that children have computer in their bedrooms, nearly the same percentage of them (53%) had also an access to Internet in their bedrooms. However, 43% of interviewed parents admitted that their children had television in their private rooms. 76% children had a cell phone and 8% a smartphone only for their personal usage. So the question of media education and media literacy formation in the Czech families seems to be highly important and topical.

.1. Parental monitoring and media regulation

In this text we are concentrated on the educational context of a family life with regard to the media use and parents monitoring. In our questionnaire, we tried to measure two levels of parents attitudes towards it. An *ideological level* – what parents think about this issue – and a *practical level* – what they usually do. The ideological level of the importance of media education we tried to measure by parents' persuasion of having some rules and parental monitoring about using televisions, computers, video-games, etc. Parents' attitudes differed according to the type of media. The strongest sense for regulation and restriction we could observe by computers – a half of parents declared that it is necessary to always make rules. Other 34% thought that it was important to do this sometimes. Only 13% of parents showed a very weak support for the idea of computer usage regulations in their family. The lowest convince for regulation was mentioned by the cell phones, more than one third of our parents expressed the idea that it was not necessary to do that.

Table 3. Do you think is it important to make rules? (in %)

	Yes, always	Yes, sometimes	Yes, but only extraordinary	No, never
For watching TV	42,9	39,0	14,1	4,1
For using computer	51,8	34,6	10,3	3,3
For using of a mobile phone	30,6	32,7	28,0	8,8
For playing games, using DVD, play consoles, and other tools	39,0	36,1	17,2	7,7

We could observe some significant differences among attitudes of parents according to their age. Younger parents were more likely to regulate media activities of their children than older parents. Over more, the sense for regulation was stronger by parents with higher education (Spearman's $r = -0,123$, sig. 0,000). Very interesting finding brought the analysis according to the number of children in the family. Our data showed that by parents with more children there was the feeling of regulation stronger than in families with one child. (Spearman's $r = -0,136$, sig. 0,000). The ideological level of measuring of the necessity to regulate and monitor the media – child relationship showed us, that Czech parents are aware of the importance to do this. As some scholars show (e. g. Hagen, 2007, Gentile et al., 2012) parental monitoring can be seen as one part of an image and being a good mother/father and tell us about currently accepted parenting behaviour. “Parents use rules and regulations in their attempts to position themselves as good parents who teach their children values and sensible media use habits.” (Hagen, 2007, 388) And this could also explain our findings.

Our statistical analysis showed also the significant differences among the groups of parents according to the level of media richness of the family. Interesting results brought the finding that parents from the most media saturated environment tended to express more weak persuasion of necessity about media regulation in their households. (Spearman's $r = 0,144$, sig. 0,000). In the contrary of the previous statements parents with less media equipped families supported stronger regulation of media use among their children. Also the saturation of media equipment in bedrooms of children or for their private use was in the negative correlation with attitudes towards the “ideology of regulation” (Spearman's $r = 0,283$, sig. 0,000). We could guess that parents with higher level of persuasion about the importance of regulation also tend to reduce the number of media in their households.

If most of parents are persuaded about the necessity of media monitoring, how do they organize it in practice? Even if we could find some differences among families according to the age, education of parents and number of children in previous questions, when we asked about how it works, some of the former significant differences have disappeared. What has remained was the correlation with the level of media saturation in the household and in bedrooms equipment. The more media saturated the family was, the fewer parents tended to regulation and monitoring. Restrictive tools of mediation were used by nearly two thirds of parents and were mostly connected with using of computer, watching TV and playing computer games. More than 60% of parents admitted to restrict the amount of media use, more than 50% the media content. (Table 2) Discussions about the programme and activities that can be undertaken by their children were declared in various levels according to the type of activity.

Table 4. Restrictive monitoring in the family.

	Restriction of time (%)	Restriction of content (%)
PC	68,0	68,5
TV	60,8	73,3
Video and PC Games	61,0	54,8

There were 56% of parents who monitor and regulate the time that their children could spend by the PC and also discuss the content of their activities (53% by watching TV, 46% playing games). 19,7% neither care about the time nor about the content by PC and TV, but there exist 30% of parents who are not involved in PC games regulation at all. However, 18% of parents declare that they regulate the content of their children's activities but do not care about the time. Parents who regulate the time spent with media are also more likely to regulate the content of their children's activities (Spearman's $r = 0,560$, sig. = 0,000). The parents who are sure about the necessity to make regulations for their children are also more likely to use the specific tools for doing so; they

more often discuss the activities that could do their children by the PC, what computer games they can play etc. One third of parents also take into account the differences between their children according to their age. The older children are being given more freedom in their media activities despite the smaller children who are tended to be more regulated.

32% of parents control regularly if the children do accept and follow the rules, in contrary 9% of them not at all. There exists a statistically significant relation between making regulations and controlling of children among parents (Spearman's $r = 0,486$, sig. 0,000). Parents who are more restrictive also rely more on the controlling. We could call them the restrictive type, even if we do not talk about the restrictive monitoring in the full sense of mentioned typology.

In our question concerning the methods parents use for teaching children about media literacy our respondents stressed out the active interest in children's life with media and discussion with the child (Table 3). These parents' aims correspond to the active mediation type. Restriction of time was mentioned as a very often practice in 42%. Coviewing as a very often used method mentioned only 17% of our parents. Trust in children's own responsibility expressed as a very often used method 26% of them. Very interesting was 20,8% of parents who never watch TV or do something on PC with their children.

Table 5. How do parents try to teach children to cope with media? (in %)

	Very often	Sometimes	Never
By giving the exact time or restrict the time they can spend with media	42,8	47,2	10,0
By active interest in the activities of my child	50,9	43,6	5,4
By coviewing, coworking...	17,4	61,8	20,8
By discussion of the media content and activities of my child	49,0	45,9	5,1
I rely on his/her own responsibility	26,3	40,8	32,8

We can compare our data with some other recent studies. Parents differ in the extent to which they express a need for rules in their family. Leung and Lee (2012) or Lee (2012) show in their studies that the most powerful way to avoid the internet addiction of children is the strict parenting style and the restrictive mediation. Kutner et al. (2008) or Hagen (2011) point in their studies at the fact, that parents' first-mentioned and most frequent concern was not about the content but rather the amount of time each child could have spent with media – so the use of time. In the study made in Indonesia (Hendryani et al., 2014) the authors found out that parents of children in the age 9 – 11 years claimed to enforce media usage rules at home. Restrictions applied to electronic games and Internet was used more frequently than to television, but the children perceived these as topics open for discussion rather than binding instructions. It seemed indeed difficult for children to take media usage restrictions seriously, especially regarding television, since TV sets tend to be on at all hours at home. In Hagens (2007) sample of qualitative interviewed families varied the degree of explicit and restrictive rules for media use. While some parents formulated explicit rules about media use, others stated that they were more concerned about the transmission of attitudes and values related to media usage.

.2. Who decides about the rules in family?

In our study we were also interested in question, who feels responsible for making rules among the spouses or who participates more on the media literacy education. Nearly 20% of mothers thought that they had decided about the media use in their families, and only 4% of males. The greatest amount of respondents declared that they negotiate this with their partner (36% of males and 28% of females). Mothers were more likely to be convinced about the common negotiation with their children too (31%). Nevertheless, we could not find any significant differences between the genders of parents. Hagen (2007) in his results from a qualitative interviews points on the fact, that in his studies there were *disagreements* in the families regarding rules and regulations on numerous occasions. In some families, children accepted the limits, but they might still get angry or upset. In other families, the children continually negotiated with the parents and tried to stretch the limits. It made a difference whether the parents had explained the purpose of the rules to the children, and if the parents had developed a common understanding or agreement with their offspring. Most of the time, the parents agreed in their regulation of the children. Still, in their interviews media use was a daily source of discussion and negotiation among children, young people and their parents. In our sample, there was possible to observe the

tendency to involve children in the discussion about family media rules (nearly in 30% of them). Especially older children were seen as partners to the discussion about media use.

3.3. *Fluent of rigid rules?*

More than two thirds of parents in our sample declared that weekend or holidays are special occasions when restrictions and rules could be changed. The second important reason to change the rules was connected with reward or punishment of children. A bit stronger was the punishment aspect (48%) than reward aspect (40%). But it seems to be a fact, that nearly one half of parents use media as an educational tool. The third interesting reason for changing the rules was connected with parents' needs. They declared, that having a time for themselves or the necessity to find some activity for their children could be a reason for changing rules. According to this we could call this reason as "substitutional/ alternative". Media should substitute parents or adults/peers. Parents reported the rules as something that could be changed if necessary and as a topic for possible negotiation in the family.

Table 6. What are the reasons for occasional change of rules for media using in the family?

	It is a reason for (%)
It is a weekend	67,3
Holidays	70,5
I need time for myself	30,9
I need to find some activity for my child – so I use media for it	30,5
Media as a reward for my child	40,0
Less time for media as a punishment for my child	48,0

In some families, negotiations about media use were constant in the sense that children's media use was a topic of continuous discussions among the children and their parents. Generally, for the parents, the discussion about rules related to media usage was significantly a discourse about education.

Conclusion

Our data offered us a new view on the private space of contemporary Czech families and their everyday life. Czech parents expressed a strong belief that media use has to be regulated and monitored. At the ideological level, there were some significant variables that influenced parents view on this issue. More educated and younger parents declared tendency to support the "regulative and monitoring" values. In practical everyday habits we could not have found such a tendency. Nevertheless, at both levels there were correlations with the "media and children's bedroom saturation" in the family. The more the household was equipped, the fewer parents supported some regulations. Restrictions could have been probably hidden also in lower number of media equipment in families. Those parents who were more convinced about necessity of media regulations were also more likely to bring it to their lives in families. At about half of our parents was strongly being used the active monitoring with discussion and active interest in children's media activities. According to the different media in family, we faced the situation that cell phones were the least monitored tools. If we take into account that they are often equipped by possibilities to reach internet, play games, etc., there could be seen a critical educational point in family efforts.

By measuring the situation in parental monitoring in the Czech families we had to rely on declarations of parents that could have been formed into the socially desirable responses. As there has been already mentioned, being the person who develops a media literacy by his/her children belongs to the image of "being a good parent". In our survey, that could want to express especially better educated and younger parents. New and more detailed information could bring us other methods of data collection – observation in families, interviews, etc. A positive moment of education in many Czech families is, that one third of interviewed parents involved in discussions about media use their children. Parents declared that communication and trust belong to the media literacy education. Fujioka and Weintraub Austin (2002) point out in their research findings that parents with an open communication style are more likely to make use of discussion-based intervention strategies applied to television. Hendryani et al. (2014, 335) recommend: "Parents should discuss the potential media effects with their children,

including the consequences of excessive use. And they should involve their children in making media rules at home, such as when and how long they can watch television or play electronic games.” The challenge for the next research is to learn more about the media-richest homes among the Czech families with children, to experience better their environment, family communication, habits and education.

Acknowledgements

This paper was supported by the European Social Fund [grant number CZ.1.07/2.3.00/20.0209 Development and support of multidisciplinary scientific research team for the study of contemporary family at UHK].

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INTE 2014

Content analysis of selected Slovak educational journals focusing on the issue of teacher's mental health

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Abstract

It requires a good mental health of teacher to comply with all the requirements that one has to adhere to in pedagogically – educational process. We wanted to find out, which topics are being processed by selected pedagogical journals and to which extend the topic of teacher's mental health is handled. Pursuing a content analysis of three Slovak pedagogical journals, we've found out that the most attention is paid to educational topic, to various information and reviews, but only negligible number of articles is dedicated to the teacher's mental health care.

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Peer-review under responsibility of the Sakarya University.

Keywords: Mental health of teacher; pedagogical journals; content analysis;

Introduction

In general, the teacher is expected to educate students (to mediate knowledge, skills, ways of thinking and activities of certain scientific, technical or artistic field according to the teacher's approbation) and to tutor them (develop their interests and opinions, skills, characters according to how he's got to know the student while focusing on the individual differences) (Čáp, Mareš, 2001). Teacher teaches students, controls and assesses their knowledge, but also shows that he's interested in their problems and difficulties with learning, helps out, advices and guides students.

Spousta (2003, s. 352) claims that „an extraordinary motivation for his own students is not only teacher's technical knowledge, but mainly his personality qualities, his opinions, attitudes, behaviour and acting. These presume relaxed and sharing atmosphere in the class and informal communication between teacher and student.“

As shown in the previous lines, one expects quite a lot from a teacher – he has to be well technically skilled, has to prove good pedagogical and didactic preparation, he has to face high requirements as for his personality as well as his characteristics, one requires from him adequate social skills that need to be effectively applied in social communication and last but not least, he should serve as a good example for his students.

As teacher works with the students' personalities, is his work extremely challenging and important, because mistaken education of students may have serious consequences. Therefore profession of a teacher should be performed only by technically, personably and morally most developed individuals and this should be achieved also by adequately strict entrance testing of applicants for particular university studies. However this requires making a teacher's profession more attractive, socially more acceptable, being of higher social prestige than nowadays in our society while adequately financially remunerated.

In our practical pedagogic life, we often face opinions of students – future teachers claiming that even when having finished their studies and becoming qualified teachers they will prefer to work in other field, often diametrically different to the field of their studies, just because of insufficient attractiveness, low payment and lacking moral value of teacher's occupation, while still there is need to comply with high requirements to work in

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this profession. The aforementioned reasons cause that the graduates not even start to work for educational system or leave schools as already experienced teachers, eventually seek for other job while working as a teacher, because a teacher's pay won't allow them to live up to adequate standards.

Teacher is mainly a person with a general human problem profile and the burdens of his personal life combine with those of challenging teacher's profession. The fact, how teacher handles his problem influences his emotional state and behaviour towards people, emotional climate in personal relationships, in the school class and in his family. The survey results from various countries are therefore very alarming as they prove that the teachers are less willing to help others than adults performing other professions (Čáp, 1993).

A quality board of teachers, supportive and helpful school management, and cooperative relationships between teachers, mutual help, effective communication and fellowship are an important aspect of positive school climate. They often replace lack of appreciation and insufficient valuation of teacher's profession. Climate of a board of teachers or class influences also psyche of a teacher, his mental health, job satisfaction and motivation. But it also applies vice versa – a satisfied teacher positively influences class and pedagogic board climate. Students are more satisfied in a class with good relationships, what reflects in their learning activities. (Andreánska, Cabanová, 2012, Šramová, 2013). Teachers then work better with such students; parents are also satisfied, because their expectations towards school are met.

Knowledge on teacher's mental health and its care is important not only for pedagogic and non-pedagogic employees, but also for public including potential clients of schools – students and their parents. As a part of public education, but also within life-long education of school employees, it is necessary to communicate the above topic in various types of media. We were interested, how this topic is dealt with in various journals dedicated to pedagogic employees.

Methodology

1. Research target and questions

In our research we intended to analyse contents of selected educational journals and to find out how much these journals handle mental health of teacher.

We've defined following research questions:

To which topics is paid the most attention in selected educational journals?

How much do topics presented in selected educational journals concern mental health of teacher?

2. Method and research sample

To examine individual topics in selected educational journal we applied content analysis method, where the biggest content importance was attributed to *article topics*. We've laid down 11 article content categories in total:

Education – education methods, education styles, education technology

Tutoring – tutoring methods, tutoring styles

Reviews – book reviews

Education of teachers – development of professional competencies, life-long education

Teacher's mental health – teacher's mental health care

School management – school supervision, school evaluation

Class management – class supervision,

Class climate – evaluation and improvement of class climate

Information – information on conferences, projects, specialists

Editorials – editorials presenting various topics

Media education – media education in schools

Research file composed of following selected educational journals – volumes 2010 and 2011:

Pedagogické rozhľady (translated: Pedagogic outlooks – journal for schools and educational facilities (published bi-monthly – 8 journal issues in total)

Pedagogika – (translated: Pedagogics: Slovak journal for pedagogic sciences (published quarterly – 8 journal issues in total)

Technológia vzdelávania – (translated: Technology of education: scientific – pedagogic journal ; published monthly – 17 issues in total).

As we've performed our research in October 2011, as for *Technológia vzdelávania*, issues published up to October 2011 were analysed. In case of *Pedagogické rozhľady* and *Pedagogika* journal, we've analysed complete volume of 2011. All the journals are available for public in their printed and online versions.

Results

Table 1. Article categories in selected educational journals (amounts given in %)

Journal	Pedagogické rozhľady (Pedagogic outlooks)		Pedagogika (Pedagogics)		Technológia vzdelávania (Technology of education)	
Categories	Amount	%	Amount	%	Amount	%
Education	31	29	13	17	60	36
Tutoring	16	23	0	0	0	0
Reviews	13	18	23	30	11	7
Teacher's education	10	14	4	5	15	9
Teacher's mental health	1	1	0	0	0	0
School management	12	17	3	4	19	12
Class management	2	3	2	3	3	2
Class climate	2	3	2	3	1	1
Information	14	20	27	35	35	22
Editorial	0	0	2	3	17	10
Media education	1	1	0	0	1	1
Total	86	100	75	100	178	100

The results prove that the *Pedagogické rozhľady* journal dedicates the most of its space to the topics on education (29%), tutoring (23%), further various information on conferences, projects etc. (20%), on reviews (18%) and articles on school management (17%). Considerably less room is given to the class management (3%), class climate (3%), mental health of a teacher (1%) and media education (1%).

Pedagogika journal publishes the most articles on various conferences, projects and science personalities (35%), furthermore it handles book reviews (30%), education styles and methods (17%). In the aforementioned two volumes tutoring has not been handled at all (0%), media education (0%) and teacher's mental health (0%). The journal published a few articles on class climate (5%) and class management (3%), school management (4%) and teacher's education (5%).

Technológia vzdelávania journal focuses mainly on education methods and styles (36%), significant space is dedicated to information on conferences, projects and science personalities (22%) and school management (12%). This journal does not handle tutoring (0%) and teacher's mental health (0%) and only randomly deals with media education (1%), class climate (1%) and class management (2%) (Table 1).

When comparing the above journals, we find out that the teacher's mental health topic or the mental health care has within two years been handled only in 1% by *Pedagogické rozhľady* journal, what we consider insufficient, knowing the seriousness of the topic.

Conclusion

It is known that if energetic balance of a person is negative on a long term, the output of energy is higher than the intake and if a person lacks sources of happiness in personal life or in his profession, he / she might suffer a burnout syndrome. Here we speak of total physical and mental exhaustion as a consequence of long term stress influence and inadequate handling of mental burdens. In case of teachers, as one of the most endangered groups, this demonstrates as tiredness, inactivity, depression, physical morbidity, negative attitude towards working environment, towards colleagues and students and towards themselves, by negative self-valuation, concentration disorders, increased irritability and similar.

For effective education process management, it is important that a teacher as its key factor is equable, self-confident, not feeling anxiety.

It is therefore surprising that only negligible number of articles in journals dedicating to pedagogic employees, schools and educational institutions handles topic of teacher's mental health. It is mainly the information and knowledge on this topic that might direct teachers towards better self-knowledge and to ways of keeping their peace of mind or to lead them to various interactive activities, within which they'd work on their personalities' development.

From our own pedagogic life, we know that interactive activities based on experience learning strengthening social and personality competencies of teachers are very welcome. Our previous finding results show positive influence on some personality and social variables (e.g. Hamranová, 2004, 2011, Hamranová, Šramová, Fichnová, 2008, Šramová, Hamranová, Fichnová, 2010), that's why we consider it as one of the possibilities, how to effectively influence teacher's self-picture, his mental health, to support prevention of burnout syndrome and therefore positively work on social and emotional comfort in school environment.

Education should be a personality cultivation process (Poliaková, 2013), and this concerns also education of teachers on mental health topic. It is therefore important to inform about the above topic in educational journals.

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Continuous training process *stricto sensu*: the meanings built by the teaching staff from private teaching in colleges facing the legal demands

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Abstract

This paper has as objective to understand the meanings that professors in a private environment, establish about the teaching training in post-graduation courses *stricto sensu*. So as to do it, we decided to base on a Theoretical-methodological concept which was discourse analysis referential, presenting Orlandi in the French segment. The choice for this instrument which seeks for the meanings that goes beyond of what is said, the explicit; it demands an understanding of the context where it was produced and a deconstruction of the remaining discourses in the week of meanings which are present in the silence. As a result we could find: the discourse of degree and the discourse of training, demonstrating a dispute in the discursive field.

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Peer-review under responsibility of the Sakarya University.

Keywords: Training process; Continuous training process; Degree; Professional Identity.

Introduction

Do the courses of *stricto sensu* formation guarantee a docent formation or only the further learning of specific knowledge? Are teachers, when looking for these courses, after a *preparation*, as specifies the Law of Guidelines and Bases of National Education- nº. 9.394/96- or after a *formation*, as literature points out as necessary to the teacher of high education?

The difference between preparation and formation for teaching inserts itself in the field of professional identity, as Aragón emphasizes (2000).

In this paper, the formation presents itself as an analysis category. In addition, as says Saul (1996), formation is a development process that accompanies all human beings' lives. Being so, we establish as a theoretical- methodological base the Discourse Analysis (DA), in the perspective of Orlandi (1998), which presents itself as a possibility of understanding the process of construction of discourse about the necessity/demand of high education teachers' formation.

This paper is hence structured: in the first section, there are the general questions about docent formation and in the following one the presentation of the theoretical-methodological path. The third section has the research data, split in two items: profile and teachers' discourses. At the end, the final considerations.

Docent Formation

We understand that formation presents itself as an important element that can contribute to the docent professionalization. The debate about professionalization makes emerge the formation, because the profession

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defines itself by its practices, by the establishment of rules and by the knowledge of the undertaken activity, as says Sacristán (1995).

The profession is built in a knowledge considered legitimate, which supports itself on a social practice, when specific knowledges are taught and shared with those who intend to insert themselves in a determined group, and that identify themselves with the group in the development of a specialized activity, socially recognized.

The debate about the teacher's professionalization involves formation, career, self-regulation (deontology- ethic code) and professional knowledges, those built through and in the profession, "that imply articulations between practical knowledges and technical knowledges, which are at the centre of the identity structured by the job" [author's translation] (Dubar, 1997, p.238).

In the ambit of studies and productions on professionalization, the formation of the education professional has been becoming an element increasingly relevant, result of observations and debates in several fields of knowledge, such as Sociology and Pedagogy.

About the high education teacher's formation, this is a constant movement of seeking, of seeing and re-seeing oneself as subject and part of a whole.

We add that the end of the XX century and beginning of the XXI century point out to the necessity of a new professional. It is demanded then a professional no longer fragmented or disciplinary, but with a solid formation.

We understand, nonetheless, that the criteria for the exercise of teaching are followed by legal and formal demands throughout the History of Education, and in the History of High Education. The criteria of high education teaching demand a formation for their exercise, and in each historical moment the formation makes itself be expressed differently, therefore revealing the professional needed for attending the society's demands.

The Law of Guidelines and Bases of National Education nº 9394/1996 (BRAZIL, 1996) had a recognized importance in the amplification of interest in the field of teaching, when it established criteria for the exercise of teaching, as we can confirm in article 52, incise I, that "a third of the academic staff, at least, with master and doctorate degrees". In incise II of article 88, in transitory dispositions, a deadline of eight years is set "for institutions to fulfil the obligation".

The chapter VI of the referred law, which disserts about the education professional, in article 66 establishes that the demand for the exercise of high magisterium "shall be done in the level of post-graduation, preferentially in courses of M.D and Ph.D.". Thereby, the law establishes, for the exercise of teaching in high education, only the necessity of a formation in courses *stricto sensu*, nonetheless, being there scarcity of qualified personnel, it is admitted the teaching without the *stricto sensu* degree.

This legal demand, as for the formation of the high education teacher, is not new, as History in Brazil and worldwide has been showing, but today is translated in a new context. Since the decade of 1990, a differential is added: the establishment of demands for the exercise of teaching and the verification of such demands in the criteria of evaluation of high education institutions, which contribute for the analysis of institutional quality.

Beholding such context, what do teachers say? Why do they look for courses of *Stricto Sensu* Formation, henceforth SSF? In this perspective, we question: which meanings are produced by high education teachers, and how to interpret the SSF meanings expressed by them? What must do those who seek the interpretation of meanings?

Seeking meanings: a theoretical-methodological path

The search for meanings puts us facing the subject that signifies and the context where the meaning is produced; social and historical context- history as facts that reclaim meanings-. As says Orlandi (1998), the Man is a historical subject, not only because he exists in a determined period, but because he makes history and attributes meaning to it. On the other hand, History, despite made by the subject, is not transparent to him; it is filled of meanings which reveal other discourses and other subjects, and other times, and other histories. In another paper, the author affirms, "when speaking, and giving significance, I signify myself" (Idem, p.28).

Hence, the work of who looks for the meanings goes beyond words, beyond the explicit. Meanings are,

thereby, parts of a process. They happen in a context, but are not limited by it. "They have historicity, have past and project themselves in a future" (Idem, p.103).

We understand that the discourse does not cease to exist or closes inside itself; it articulates with other discourses and with the contexts where they are produced, once: "meanings are not born ad nihilo. They are created." (Orlandi, 1998, p.103). And, being them created, their production is given by subjects that print meaning to things, facts, and to the world.

According to Orlandi (1998), the analyst must have the comprehension that meanings that can be read are not necessarily only in the object of reading. Meanings go through relations of a text with other ones, of subjects with others subjects, and of subjects with texts.

In the search for comprehending meanings, we listened to private high education teachers, who, at the time, expressed [or not] the wish to do a SSF, or are currently undergoing it. Which are the meanings they seek, profess and censor about the search for courses of strictu sensu post-graduation in the context of established demands.

As subjects of the research, we chose teachers who work at the private high education system, in private HEIs (High Education Institutions) for more than three years of teaching, and who are taking courses of stricto sensu post-graduation.

In order to confront the meanings teachers reveal in their search for formation, we also did interviews with teachers who work at private HEIs for more than three years, but neither possess a stricto sensu post-graduation degree nor are taking one, in order to identify the meaning of this formation for these subjects too. For all these, we selected the interviewees in 3 (three) categories¹¹³ (C), with a total of 15 (fifteen) interviewed teachers:

C1 – Those who joined the SSF after the educational reform, which is presented after the promulgation of LDB 9394/1996, and their comprehension through the institutional spaces in the context of demands experienced through external exams, and evaluation of the offer conditions of graduation courses. We considered this the target group of the research with intention to analyse the expressed reasons of the search for SSF spaces, and the meanings attributed to it. There were 10 (ten) selected teachers, from which 8 (eight) accepted to participate of the interview. The choice was made from a request to the department of personnel of the HEIs where the teachers were taking courses of stricto sensu post-graduation and that had more than three years in their institution, not taking to consideration the course where they worked.

Throughout the interviews, two other categories emerged, which are:

C2 – Those who are willing to join SSF spaces. Our intention is of analysing the expressed reasons for the wish for these spaces of formation and the meanings attributed to the SSF. There were chosen 10 (ten) teachers, of which 4 (four) accepted to participate of the interview. These were picked from the observation of what they expressed informally about the wish of taking courses of stricto sensu post-graduation.

C3 – Those who are not willing to join SSF spaces. Our intention is to analyse the expressed reasons of such position and the meanings attributed to the SSF. There were chosen 5 (five) teachers, of which 3 (three) accepted to participate of the interview.

The type of interview was semi-structured, because it allows a process that, despite the existent guiding questions, permits a freer way, with space for interpellations.

The interviews had a first stage, which encompassed an initial research with the teachers to expose our objectives and then do the interviews. The interview's script was previously elaborated and consisted in 4 (four) items: General and Professional Data of Identification; Reasons for Joining High Education Teaching; Meanings of being a teacher in high education and Motives for the stricto sensu post-graduation. After the transcription, the interview returned so that the interviewed teachers could validate it, do modifications they judged necessary, authorizing the use.

Afterwards, we made the mapping of the data, which allowed us to identify a profile and answer to the research's unsettlements.

¹¹³ All teachers work at private HEIs in the state of Pernambuco/ Brazil. We established this mark of docent experience from the understanding of Huberman (2002). The docent career, once the definitive choice for it is made, is at the end of its first phase- Exploitation (three years) - when concerns and unsafeness give place to a new phase of surety.

3.1. *Who the teachers are: coming to a profile*

As for age, the largest concentration is between 41 and 50 years old, being there six teachers, who act in HEIs for more than six years. As for salary, twelve of the interviewed subjects gain over ten minimum salaries [equivalent to \$3.276, 02 dollars]. These subjects are responsible not only for their living, but for their families', mainly if we take into consideration that ten of the twelve declared to have children.

Considering the end of the first graduation of the interviewed teachers, one finished college in the 1960 decade; five in the 1970 decade; five in the 1980 decade, and four in the 1990 decade. From the total of subjects, seven declared to have more than one graduation degree. Among the concluded graduation courses, the interviewed teachers went: three to Pedagogy; three to Entrepreneurial Administration; three to Letters, and the courses of Psychology, Economic Sciences, Teaching in Mathematics, Philosophy, Engineering and Social Studies had each one a subject. However, nine of the interviewed teachers concluded their graduation courses in the area of formation of teachers.

As for the ingress as High Education teachers, two said to have started in the 1970 decade; two in the 1980 decade; being the vast majority, eight, to have started in the 1990 decade, and three in the 2000 decade. Hence, teachers, in their majority, have at least six years of high education teaching, adding that to their accumulated experience, no longer being beginners, if we consider, for example, the phases of career as points out Huberman (2002). The period of four to six years would encompass the Stabilization, marked by the "consolidation of a repertory of basic practical skills, which bring safety in work, and professional identity" [author's translation] (idem, p.54).

The 1990 decade also holds the largest conclusion of lato sensu courses, once eight teachers declared to have taken them. From the three who claimed to have a master degree, two acquired it in the first decade of the XXI century. A fact is that these teachers' specializations, with one exception, happened when they already were teaching in high education institutions. Two of them joined a HEI in the 1990 decade, and claimed that having the master degree was an extra indicator considered relevant for their hiring. Such fact proves that most of docent formation was done in the 1990 decade, which is the decade of the educational reforms in the conjunct of political reforms performed in Brazil.

The teachers who possess a master degree had it done in the Education field. Two of the teachers initiated and stopped the SSF studies for financial issues, pointing to the huge difficulty in conciliating the wish for a SSF and the impossibility of resigning to do it.

We found in the interviewed teachers' answers that fourteen of them have a straight relation between the discipline they teach and the graduation course they went to, and only one whose discipline relates to the completed SSF. Therefore, the graduation studies are the work referential, and not the SSF studies.

4. Teachers' discourses

4.1. *Meanings expressed by teachers: beginning of high education work.*

The work of teachers in Continued Formation (CF) courses is one of the criteria used by HEIs to hire, as well as the experience in public institutions and as teacher in the high education public sector. Are also observed the teacher's performance in case of temporarily replacing a HEI's teacher or whatever other services done for the HEI in other areas, and also the testimony of other teachers about the teacher's work in class, as we can visualize below:

I have already worked for a long time with teachers' training, so I already had a certain experience in dealing and supporting this process of formation in the State Secretary of Education, and then came the invitation (C1 teacher n°8)

We realize that the recognition of the developed professional practice is established from the privileged locus of teaching, the classroom, which comes to be the instrument of visibility of the docent's professionalism. It

becomes evident due to the emphasis given by the institution when it takes as base the knowledge of professional experience.

The matter of recognition of competence means that a teacher builds himself in the practice he executes. Being a teacher is a process of forming oneself continuously; we build ourselves teachers in the action of teaching. Hence, the competence is recognized in the doing, a doing that simultaneously gives evidence of competence.

The C2 group and five C1 teachers point that their admittance in high education is related with their professional trajectory as teachers. It becomes clear when they bring forth their histories of professional life as teachers, telling how they started at magisterium and in other levels of teaching and went on developing activities in this docent doing. Despite these activities not being exclusive to the classroom, a mark of teaching recognition was printed through works such as CF and advisement, which means to say that we learn to be teachers and constitute ourselves teachers in the practice.

4.2 *Expressed meanings about the SSF*

In what concerns the SSF, the teachers point to an understanding of directed formation from the perspective Macedo (2001) works on, as a process that is built in the synthesis between the theoretical and the practical, but does not restrict itself to the technical dimension of the doing. This process comes as a need of upgrading and perfecting the contents of the initial formation, in the perspective of professional life: *“Trying each time more to go deeper, having a theoretical methodological basing. As I do the CF, I work as a professional in a more solid and consistent way”* (C1 teacher n°1).

Thereby, the formation inserts itself in the space of the profession’s knowledge, which goes beyond the disciplinary, specific knowledges, and heads to a process of specialization of the function. We realize also the linking between formation and the profession’s ethic, which implies specific knowledges and a constant study too. Once *“the teacher has to have the formation, be ethical, sensitive towards the student, and study a lot”* (C2 teacher n°4).

On that thought, the practice articulated with the ethical aspect should be rethought simultaneously with a look to the student, to his totality, which implies in rethinking the practice itself. Then, the formation lights the practice. Nonetheless, it cannot be any formation; it has to be the one that has the practice as a starting point for formation. The formation is a moment of reflection, of a professional self-review, and, in such perspective, the subjects say: *"I wanted formation, but not for the formation itself. I wanted something that connected to my practice"* (C1 teacher n°4).

On the other hand, we also found the SSF as a necessity that is established in the legal ambit, attached not to the question of a continuous process inherent to the docent activity, but as an obligation, an imposition that is justified by the Market's new demands, which establish the need for the SSF to teach in high education. The teachers understand that the SSF becomes necessary in the perspective of safeguarding the job, as we observe in the following phrase: *"There isn't a reason for joining the course [SSF]; it was what showed up. I got in to do whatever it is... As I was going on without the master's degree, sometime they would brake me"* (C1 teacher n°3).

The attempt of keeping the job evolves to the search for the SSF, and it does not need to be in the docent's area. Therefore, a formation is not pursued, but only the acquiring and guaranteeing of degrees. In the Market's space of competition, possessing degrees is a requisite of differentiation and a condition of assured employability.

The fear of losing a job acts in several logics. From one point, it forces a disciplining of the teacher at the face of high levels of unemployment; from another standing point, it creates regulation for HEIs to gain or lose accreditation, therefore they institute the possession of degrees as one of the items of institutional evaluation (FELDER and IMEN, 2003). Besides the knowledge on the hiring of teachers more adequate for the styles of evaluation, as say Placco (2003) and Dias Sobrinho (2004), these logics have been pressing the pursuit for SSF degrees when it comes to curricula analysis.

Being so, the search for the SSF can be explained by the tension between the 'degree discourse', which brings a mark of distinction and professional differentiation, and the 'formation discourse', which is materialised as part of the process of professionalization in the reflection of social practices and construction of professional knowledges.

The comprehension that the legal demands for the exercise of teaching in high education- related to the SSF- is unnecessary to the teacher can be observed in the speech of a C1 teacher. He has a technical formation, and emphasises the importance of the specific knowledge learned in the initial formation. As to the exercise of teaching, he presents a super-valuation of experience. Experience, according to the teacher, is enough for formation.

To teach in the graduation I had to go through a SSF. One of the reasons was the legal demand, despite this demand being absurd, because it demands from teachers who have a large experience, who have a great teaching capability, who are teaching for 10, 20, 30 years, to have a master degree (C1 teacher n°2).

We can also find a tension between the need of a SSF that walks towards a pedagogical remake, and the legal demand of possessing a master or doctorate degree. There are those who recognize the importance of the SSF, but the current context exerted upon them a positive pressure, in the sense of forcing the teacher to admit that needs a process of constant study. However, in this process, many teachers face a new situation, the one of having accumulated experience considered outdated, and so, to fulfil what was legally instituted becomes imperious even if in spite of the search for formation, which gives visibility to the HEIs, proved by the professional formation of their docents and the updating of their practices.

So I think that this issue of practically impelling the teacher to have a master and doctorate degrees has a positive side, but, at the same time, it has a down side, and this side is exactly this: people with large experience- I know many- and nowadays are discarded for others who don't even have experience, just because of a degree (C1 teacher n°4).

C2 subjects are also inserted in this meaning, but present as excuses for not being going through a SSF the life conditions that thwart a private HEI teacher to back from his activities without any cuts in salary, and to dedicate himself to the continued formation:

I would like very much, and feel impelled to do it [the SSF]. I started it out, and had to drop it because of a family need. To have a higher degree is a constant demand, and I must have it, but I cannot because my financial demands (family, my parents) make it impossible for me to leave an extensive work load such as mine (C2 teacher n°9).

The discourses bring the work conditions of the private HEIs' teacher, who, for being paid per worked hour, needs to invest on his formation with losses to his payment. There is also an absence of encouraging organs in private HEIs, which are present in public HEIs, despite increasingly low on resources.

The teachers of the C2 group bring forth the difficulties to join SSF courses offered by public HEIs, which do not consider, when it is time for selection, the teaching experience of these professionals and their work conditions, demanding most of times exclusive dedication, an action that draws away any possibility of ingress.

I want the master degree. I think I have the teacher profile for having a master degree. I have been teaching in high education for over 10 years. I have been teaching in a general way for over 20 years, and I have taught in all imaginable courses: technical course, pre-vestibular¹¹⁴. I have taught to other professionals, but they, the master course teachers, wanted someone who could give them full dedication and lots of production. With this fee-per-hour rhythm, how could I? (C2 teacher n°5)

What the discourses of the C2 group teachers do not say is that the HEIs do not offer or finance SSF courses for their teachers. Besides, the absence of investments comes through the recognition that the Market already has professionals with master and doctorate degrees, many of them who are from public HEIs, and retired teachers, who can be easily hired, already trained for the context of demands, with research experience and a production recognized by the Academy, "ready" for work in these institutions.

These institutions, because of the hiring protocols they take with their docents, can fire them without considering the experience and contributions given by the docents to the institution itself, and replace them by professionals that are more qualified, without the necessary investment from their part (Aragón 2000).

Thereby, the discourses silence about that the professional recognition once used for hiring is no longer worthy for maintaining the job or being hired today, in the private HEIs.

Nevertheless, we also found two C1 teachers and a C2 teacher, who even in this context of demands, when questioned about the reasons that triggered the search for the SSF, claimed that it was part of the teaching activity, inherent to it, as a moment of further learning, of honing knowledge. For this group of teachers there is a differential: they already have a master degree and are studying –or wish to study- in a doctorate degree course. In a certain way, for the level of established demands of the degree, they already fit in.: *"My concern about seeking continued stricto sensu formation is because a teacher must never stop, must be always studying. Our work object cannot stop".* (C1 teacher n°4)

As professional activity, twelve teachers reported that they have more than one activity related to the educational process, being it referent to: consulting, formation instructor, teacher in other education levels, technical function in the Secretary of Education of Pernambuco, pedagogical headmaster, accompanying of research projects, coordinator of *lato sensu* post-graduation courses and graduation coordination.

Some of the teachers have another professional bond besides the one of teaching, and five of them work in a non-related to education activity, being them: System analyst, liberal profession, privet administrator and technological company administrator. It reflects in the construction of the docent identity, once teaching is a complementary function, secondary. The real profession lies somewhere else. Among the teachers, three of the C1 group claimed not to be teaches, but do teach to complement their profession. They do not show any identification with teaching and activities inherent to it. They do not have a teaching identity, as we observe in the expression below:

For me the education area will always complement the administration area. I am an administrator, in formation and vocation. I do not consider myself a teacher, the

¹¹⁴ It is a type of quick course, which Brazilian high school students often take, in order to better prepare for the selection process, known as Vestibular, which grants them admittance in a high education institution.

teaching routine is tiresome for me. This thing of having to teach on a daily basis, to have to correct tests, to have to welcome students, do planning. It still gets me tired (C1 teacher n°2).

Thereby, as Pimenta (2001, p.89) affirms: “a professional identity is built, then, from the profession’s signification, of the constant review of the profession’s social meanings” [author’s translation], and this construction, despite being social, is individually carried on. To claim to be a teacher is also saying to be nothing else, it is to claim as yours a pack of practices, values and beliefs that constitute themselves as of a determined group.

1. Final considerations

The demand for master and doctorate degrees silences about the issue of the formation in the academic *ethos*. The discourse of the interviewed teachers brings the issue of obligation and not necessity, facing the Market’s demands. The analysis of the 9394/96 law has similar outcomes, once the law only expresses the fulfilling of a dispositive, which, when presented, only legitimates the exercise of profession, but not the possibility of construction, perfecting and professional qualification. Not mentioning that, as says Canário (1999, p.46): “the acquisition of a pack of knowledges, the internalization of a group of values, and a domain of a set of technical gestures do not constitute pre-requisites susceptible to a linear transferability, determining professional action” [author’s translation].

Debates about teachers’ formation have intensified greatly throughout the last decades, and studies demonstrate that the required formation for the teacher surpasses the classroom pedagogical activity, centred in the didactical aspects that are limited by the doing for doing. (PIMENTA, ANASTASIOU, 2008), despite a few teachers pointed out to the movement of reflection on the practice.

The context of Educational Reforms, which took place in Brazil during the 1990’s, alongside with the State Reform, brings a new element to debates: the establishment of teaching quality standards, and one of the criteria of standard quality is the teachers’ formation in post-graduation courses, as a demand for the high education teacher. Such standards can be found in legal documents, for example the Law of Guidelines and Bases of National Education, n° 9394/96.

The demand for formation in post-graduation courses, which is one the criteria of the HEIs’ quality standard, has resulted in severe tension from the teachers, who face the necessity of having a post-graduation degree, considered to be urgent. On the other hand, we observed very few institutional initiatives in formation courses inside the own institution, or any investment in *stricto sensu* post-graduation for its teaching staff (PIMENTA, ANASTASIOU, 2008).

Being our aim to understand what mobilizes high education teachers to seek post-graduation formation, we believe this paper does not deplete the thematic, but it can contribute to the learning of the meanings attributed by the high education professional, who is in search for formation through courses of *stricto sensu* post-graduation.

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Contribution of group work and comparative education to students' learning: Analysis of comparative design history course

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Abstract

After the discovery of steam power and machinery, the industry has evolved faster and the designers began to design products for mass production by the influence of concepts. During the "design history" courses, matching periods, designers, and products could be more confusing for students. Those courses are generally taught theoretically and are not implemented as interactively.

This study based on "Comparative Design History" course, in which design students work in groups on various topics and match the relevant cases between "design history" and those topics. In this paper, group work, comparative education and its contribution to students learning, will be studied.

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Peer-review under responsibility of the Sakarya University.

Keywords: education, group work, comparative education, design history

Introduction

Group work is an improving learning system due to its enabling style for students to negotiate and share their ideas with other group members. This learning type also supports the development of skills and behaviors which are needed in workplace (Beccaria and et al., 2014). Bormann and Henquinet (2000) define group work as "*an assignment of two or more people interacting with each other and interdependently working together to achieve specific objectives*". Since for a long time universities have been organizing workshops and group work for making students gain new points of view and prepare them for the business life before graduation.

Considering that understanding, a group work is conducted at Dogus University, Faculty of Fine Arts and Design, by the participation of the students of Industrial Product Design Department during the "Comparative Design History" course. In this course students work in groups and choose a subject at the beginning of the semester. Every week at the end of the lecture, the instructor declares the next lecture's time interval to groups, to make them do research in their topics for that period. The following week, after the instructor gives lecture, groups are expected to present the findings of their research. The main aim of the course is while giving students the understanding of the influence of various periods and events on industrial design, also giving them the ability to work in group, do qualitative research, prepare and deliver a presentation.

"Comparative Design History" course

"Comparative Design History" course is one of the compulsory courses of Dogus University, Department of Industrial Product Design. The course is 5 ECTS and 3 credits (3 theoretic), language of instruction is Turkish and each fall semester approximately 10 to 35 students enroll the course.

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The course focuses on a variety of obvious or concealed factors that are involved in the stages of design, production and usage throughout the creation and development processes of design. The course also focuses on a variety of disciplines that are involved. Socio-economic, socio-cultural, technological and artistic effects are discussed using a comparative approach and interactive methodology, in which causal relations are questioned for the aim of making a synthesis based on the outcome of discussions. The course requires the active participation of the students and is conducted by the use of audio-visual aids to support discussions.

2.1. Aims of the “Comparative Design History” course

The aims of the “Comparative Design History” course are;

- to gain students the understanding of the influence of production on design starting from pre-industrialized period to industrialization,
- to gain the students the understanding of the influence of various periods and events on industrial design,
- to give students information on design periods and designers,
- to gain the students the understanding of the interaction of developments in various places in the same period,
- to gain the students the understanding of periods and the relationship between economic and political developments in those periods with design,
- to give students information on designs and designers, using the information in professional work and apply in products and services,
- to give students the ability to do qualitative research, prepare and deliver a presentation,
- to gain the students executing duties in group endeavors, assume responsibility in the group in verbal, written and visual presentations,
- to gain students the ability of presenting to audience,
- to gain students the ability to critique each other's presentation and findings within the framework of respect.

2.2. Content of the course

The content of the course is determined according to 14 weeks, including 2 midterm exams, presentations and homeworks.

Table 1. Course content.

Week	Content	Homework
1	Information about the course and its objective. Students are provided with keywords for their work in the 2nd week.	Homework 1: Essay 1
2	Traditional Handcraft, Shakers community	Homework 2: Each groups get a subject; architecture, fashion, graphics, painting, photography, technological developments in 1850-1890
3	1850-1890 Industrial Revolution, Arts and Crafts (late 19th century), Groups' presentations (Homework 2)	Homework 3: Essay 2 Homework 4: Each groups choose a brand
4	Industrialization , Mass production, Groups' presentations (Homework 4)	Homework 5: Each groups get a subject; architecture, fashion, graphics, painting, photography, technological developments in 1890-1920
5	1890-1920 Art Nouveau (late 19th –early 20th centuries)	Homework 6: Each groups get a subject; architecture, fashion, graphics, painting, photography, technological developments in 1920-

	Groups' presentations (Homework 5)	1940
		Homework 7: Essay 3
6	1920-1940 Modernism, Art Deco, Eileen Gray (1878-1976)	Homework 8: Essay 4
	Groups' presentations (Homework 6)	Homework 9: Each groups prepare presentations about famous designers
7	Midterm exam 1	
8	De Stijl (Netherlands) Bauhaus (Germany),	Homework 10: Essay 5
	Groups' presentations (Homework 9)	
9	Emergence of professional designers, Standardization,	
	Groups' presentations (Homework 9)	
10	Streamline designs,	Homework 11: Essay 6
	Groups' presentations (Homework 9)	Homework 12: Essay 7
11	Organic designs, American lifestyle,	Homework 13: Essay 8
	Groups' presentations (Homework 9)	
12	Consumption and technology in the 60's and 70's,	
	Groups' presentations (Homework 9)	
13	The 80's and Postmodernism ,	
	Groups' presentations (Homework 9)	
14	Midterm exam 2	

2.3. Formation of groups and selection of topics

Between the years 2009-2013 "Comparative Design History" course had been placed in the 8th semester in the curriculum, but after the revision that was made within the framework of the Bologna Education Program, the course was added to the 3rd semester in the curriculum. The new program began to be implemented in the 2013-2014 Academic Year, and the students of 5th and 7th semesters took that course in conjunction with the 3rd semester students. In 2011-2012 Academic Year 28 students, in 2012-2013 Academic Year 8 students, in 2013-2014 Academic Year 35 students enrolled the course. In this study the processing of that course in 2013-2014 Academic Year is discussed.

During the first lecture the course syllabus and aims of the course were briefly explained to the students. Then the topics were determined by the instructor, also students were encouraged for suggesting new topics. The topics were fashion, music, photography, architecture, technology, economics & politics, painting, cinema & theatre, land transportation vehicles and marine & air transportation vehicles, the last two were suggested by students.

For those 11 topics students tried to organize their group members and selected their topics. Students worked in groups of 3 or 4 members and did research for the periods according to the topics and prepared presentation for sharing their findings with their classmates. Periods were determined as 1850-1890, 1890-1920, 1920-1940, brands which were pioneer in their sector in context of mass production (Midland Railway, Kodak, Ford T, Colt, Coca Cola, AEG, Yildiz Porcelain, Chippendale, Remington Typewriter, Wedgwood, Singer) and famous designers (Gerrit Rietveld, Walter Gropius, Mies van der Rohe, Marcel Breuer, Le Corbusier, Marianne Brandt, Henry Dreyfuss, Norman Bel Geddes, Alvar Aalto, Gio Ponti, Wilhelm Wagenfeld, Peter Behrens, Raymond Loewy, Charles Eames, Joe Colombo, Eero Saarinen, Ettore Sottsass, etc) were selected for the presentations.

Table 2. Group members and topics.

Groups	Group members	Topics
1	3 students (1 female, 2 males)	Land transportation vehicles / Coca Cola
2	3 students (3 males)	Marine & air transportation vehicles / AEG
3	3 students (3 females)	Literature / Yildiz Porcelain
4	3 students (2 males, 1 female)	Economics & Politics / Chippendale
5	3 students (3 males)	Painting / Remington Typewriter
6	4 students (4 females)	Cinema & Theatre / Wedgwood
7	3 students (3 females)	Fashion / Singer
8	3 students (2 males, 1 female)	Music / Midland Railway
9	3 students (3 males)	Photography / Kodak
10	3 students (2 males, 1 female)	Architecture / Ford T
11	4 students (4 males)	Technology / Colt

2.4. Presentations of groups within the framework of the topics per periods

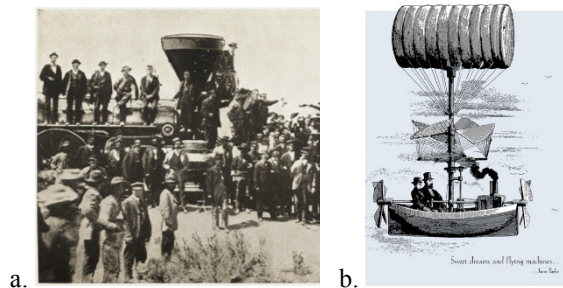
As it is mentioned before the new program (that was revised within the framework of Bologna Education Program) was implemented in the 2013-2014 Academic Year 3rd, 5th and 7th semester students attended the course together. Consequently 35 students from different semesters were in the same class and students were set free during the creation of groups, and almost all groups were comprised of students who wanted to work together. 11 groups were created and those groups were organized for presenting their findings for each week. However, there were 11 groups and due to not having enough time for each presentation, only one brand and 2 periods/topics could be presented by students throughout 14 weeks.

Table 3. Findings of groups

Topics	1850 – 1890	1890 - 1920
Land transportation vehicles	Locomotives, bicycle, automobile	Automobiles, public transportation
Marine & air transportation vehicles	Glider, balloon, ship	Ship, zeppelin, propeller plane,
Literature	Extinction of the impacts of Eastern literature, and formation of the influences of Western literature Poets and authors; Namik Kemal, Ziya Pasa, Ibrahim Sinasi, Ahmet Mithat Efendi, Semsettin Sami, Ahmet Vefik Pasa,	Servet-i Funun; the influence of the western literature Fecr-i Ati; individualism, the influence of French literature, continuation of Servet-i Funun National literary movement; the idea of nationalism, social issues Poets and authors;Tevfik Fikret, Cenap Sahabettin, Mehmet Akif Ersoy, Halit Ziya Usaklıgil, Huseyin Rahmi Gulpinar, Ahmet Rasim, Mehmet Rauf
Economics & Politics	Industrial Revolution, Factories, Working class Mass production, General Electric	1 st World War, Decline in production and economy
Painting	Realism; Jean-Francois Millet, Gustav Courbet Impressionism; Édouard Manet, Edgar Degas,	Art Nouveau; Gustav Klimt Fauvism; Henri Matisse

	Claude Monet Symbolism; Edvard Munch, Post impressionism; Paul Cezanne, Paul Gauguin, Vincent van Gogh	Expressionism; Wassily Kandinsky Cubism; Pablo Picasso, Georges Braque Surrealism; Salvador Dali
Cinema & Theatre	Independent theatres in France, Germany, UK and Western theatre's influence on Ottoman theatre Invention of cinematograph and short films	Silent films
Fashion	underskirt with many frills and pleats, women's skirts were made fuller by flounces (or big ruffles)	fashion began to evolve, 1870-1880; bustle (the decoration and clothing focused on a woman's backside) period; ruffles, pleats and new colors that were vibrant, 1880s; second bustle period; heavily decorated and more stylish dresses, more vibrant colors, jewels, beads, and different materials such as satin, velvets, and silks, 1890-1920; corsets to make waists smaller
Music	Late Romantic Period; Liszt, Wagner, Verdi, Schumann	Impressionist composers; Debussy Jazz
Photography	Portrait photographs, black & white	Artistic camera images, Personal cameras; Kodak, Leica
Architecture	Iron and glass; Chrystal Palace	Art Nouveau; asymmetrical shapes, extensive use of arches and curved forms, mosaics Charles Rennie Mackintosh, Antoni Gaudi
Technology	Steam power, Edison-light bulb Invention of typewriters, bicycles, sewing machines, harvesters, weapons	Significant improvements in "Science and Technology" invention of escalators, x-ray, movie machine vacuum cleaner, radio broadcasting, first powered flight, the theory of relativity, the mass production of automobiles, stainless steel, the first robot

In Table 3, findings of groups are analyzed in context of periods and topics. Table is formulated based on the keywords that were mentioned by the students during the presentations. After the instructor's presentation about design history, the groups' presented their research and then the course continued interactively. Discussions, comparisons and analysis were made during the presentations. Use of abundant visual and audio materials allowed making comparison effective. Below, there are examples of visual materials used for the presentations of the period 1850-1890.



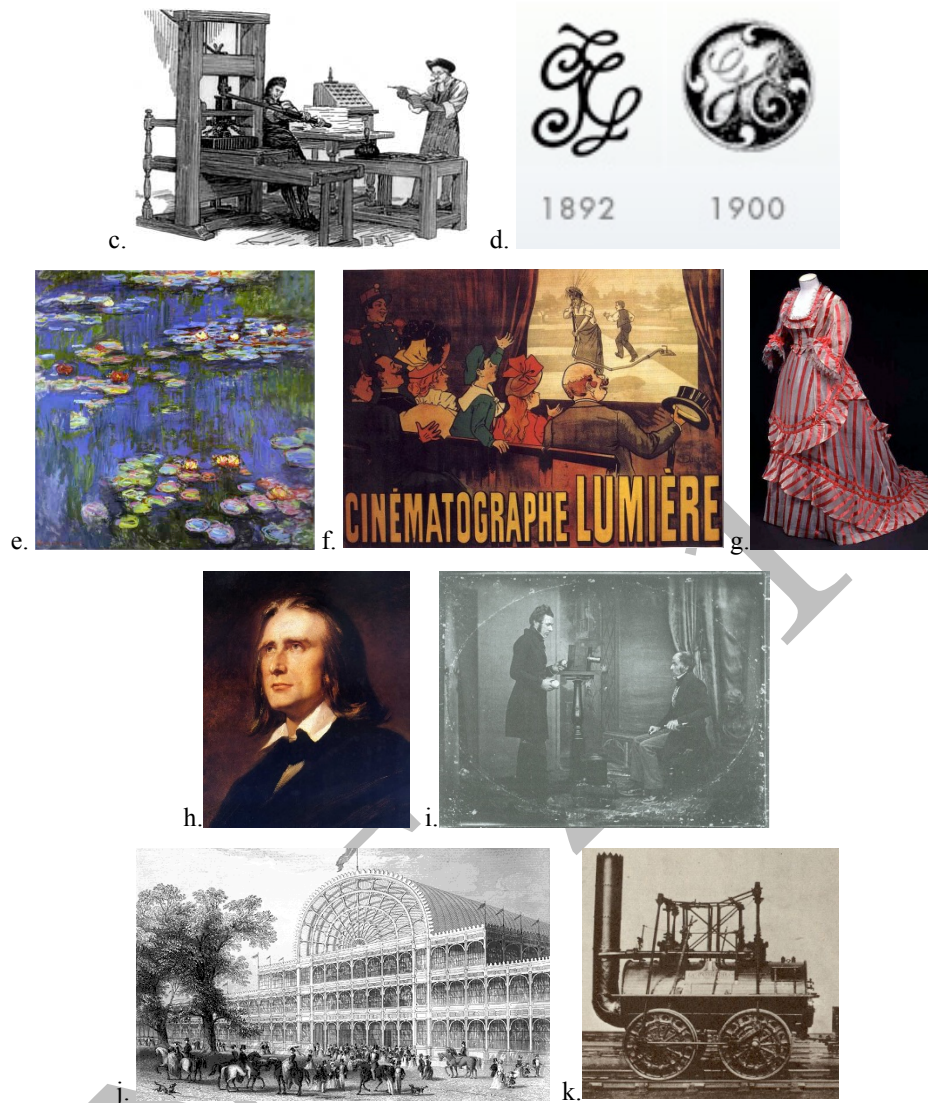


Fig. 1. (a) Land transportation vehicles; (b) marine & air transportation vehicles; (c) literature; (d) economics & politics (General Electric); (e) painting (Claude Monet); (f) cinema & theatre; (g) fashion; (h) music (Liszt); (i) photography; (j) architecture; (k) technology.

As it is seen from the figures used in the presentations -though they were presenting different topics, but the same period- the characteristics' of the figures are similar. Such as, if the clothes of males and females in the figures are analyzed; the characters in photography, music, cinema & theatre, fashion carry the same features. Additionally, if the figures a, b, c, d, i, j, and k are analyzed, it could be said that machinery, production, industry are the developing fields in that period. During the presentations, the keywords –mentioned in Table 3- and the figures matched with the design history, and students gained the ability to evaluate all events together.

Evaluation of group work and comparative education

As a basis for students' design education "Comparative Design History" course is one of the most important courses in Industrial Product Design curriculum. The course is associated with approximately 50% of the program outcomes;

- Conceive the relationship between art and design, know historical process of design and be informed about the interaction of industrial design with other design fields.
- Be informed about architecture, engineering, business administration, law, graphics, communication, psychology, sociology as fields related to industrial designs mandated by its interdisciplinary nature.
- Internalize theoretical and applicative information about industrial design; be able to apply these on products and services.
- Executing duties in individual / group endeavors, assume responsibility according to product design and production, produce ideas and apply.
- Work in harmony with professionals of closely or remotely related disciplines to design, able to express ideas and opinions in visual, verbal and written forms.

One of the most important aims of the course is; to gain the students the understanding of the influence of various periods and events on industrial design. As Boix Mansilla and Gardner (2000) define, interdisciplinary understanding is; *“the capacity to integrate knowledge and modes of thinking in two or more disciplines or established areas of expertise to produce a cognitive advancement—such as explaining a phenomenon, solving a problem, creating a product—in ways that would have been impossible or unlikely through single disciplinary means”*.

One of the aims of that course is encouraging students for working in groups and sharing their ideas with audiences. People especially prefer working by their own, instead of working in a group, cause in groups they have to collaborate on shared tasks and that require more responsibility for the work. Race (2000) determines the benefits of group work as; students gain social learning experience, make friends, get more feedback about the learning process, understand better complicated problems, learn better by sharing knowledge with others, gain skills that will support their professional life (leadership), improve their CV.

Beside those, in group work, while sharing ideas, conflict can arise from the predispositions of individuals, their personal goals, attitudes and previous experience. Conflict is an essential part of the group work, but it needs to be managed by the partners or by the supervisors' of the project (Robinson, 2013). As conflict, frustration is another negative side of group works. Lack of participation or imbalance in the contribution is the source of frustration in group works (Burdett, 2003).

In group works it is very usual to experience conflicts and frustrations, since all participants have their own characteristics that they bring to the group. That is the basic characteristic of the group work; different ideas, disagreements, conflicts, make the work much more qualified. In this course, it was intended to make students, to be extrovert, to share ideas in a group, to take responsibility, to gain a viewpoint in different topics. However as it was seen in that course, in some cases group work could be less effective than it was expected (such as only one group member prepared the presentation, or only one group member presented the findings), in those cases students could be taught how to act in a group work.

Unfortunately, as Gatfield (1999) states; one of the major difficulties of group work projects is the awarding of marks by the instructor. The members of the groups began to worry about their marks, and complained about the other group members. Finally cause of lack of communication and willing to get high marks, hardworking students tried to do incurious members out of group, and prepared their own presentation. Briefly, new groups were formed within the previous groups.

Conclusion

Teaching method of theoretical courses varies depending on the presentation skills of the instructor, capacity of students and the novelty of the course. Long course hours could lose students' interest and engaging students' interest could be a new challenge for instructors.

Firstly, as it is seen in this study, making students work in groups and do presentations could keep students interest alive. Students gained a vision of establishing a link between the events and design history by analyzing and comparing the developments that were experienced at the same time in different fields. However, the

formation of groups, distribution of tasks in groups, oblivious group members and concern of taking high marks were the negative sides of the group works. The outcomes that were obtained from that study are;

- If the students from different classes are attending the course, students should be set free for selecting their groups. Otherwise it could be troublesome for the group to find appropriate time or to communicate with each other. But also it could be seen as a challenge and having new friends could be a benefit of the group work.
- If the instructor forms the groups and determines the group members, then the groups have to be determined at the beginning of the semester and enough time have to be given groups to socialize and know each other's skills.
- The instructor should evaluate all group members' work individually, talk with all members and should not give common mark for the group work.
- For the comparative study, students' presentations should go parallel with the course content; otherwise, after a while students could begin to do presentations at different times, and periodic comparisons could not be done properly.

As the study evaluated within the context of "Comparative Design History" course that is handled in this paper, it is seen that students gain the ability to do research in a specific topic, present findings to audiences and the ability to establish a cause-effect relationship between periodical events.

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Cooperative learning in the implementation of teaching chemistry (didactic instrumentation) in engineering in México

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Abstract

In engineering you think of chemistry as a difficult and boring subject. Some professors who are teaching it, have seen apathy and lack of interest in the students. This paper presents some findings of an investigation done which allowed to listen to the voice of 250 Mexican students regarding the usefulness of cooperative learning in chemistry. An exploratory-descriptive methodology was applied, together with a pretest and a post-test. By implementing the Cooperative Learning, the importance of the positive interdependence for critical thinking was appraised and a move away was detected from the theoretical content and meaning of the everyday context of the students.

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Peer-review under responsibility of the Sakarya University.

Keywords: Cooperative learning, didactic instrumentation, engineering

Introduction

The speeches related to educative competence are often oriented to promote and impulse the student to an integral development as a process that goes beyond transmitting knowledge and skills. For this reason, the need to fulfill the application of knowledge, skills and attitudes which are expressed through the Know, the Know-How and the Knowing Self is pointed out (Delors, 1996).

Higher technological education under the competency-based model must conform to the constant changes taking place in today's world. It pretends to be an integral approach, which seeks to bond the educative sector with the productive one to form competent professionals who contribute to the technological development.

In Polytechnic Universities (UUPP), classes are taught with this model of competency-based education. As a consequence, needs and challenges have been observed in the daily development of the teaching and learning process that requires research in order to improve them. The high scholar failure rate is one of the challenges found in the subjects of the first semester of engineering particularly in the subject of Chemistry.

Problem Statement

Several educational programs of the UUPP integrate in their curricula planification subjects related to chemistry. Such is the case of the following engineering: Mechanical Automotor, Biotechnology, Biomedical, Physical Therapy, among others.

Learning this science develops in the student the ability to analyze quantitative and qualitative processes to understand and control the composition of the elements, the compounds and the solutions of the body. Besides,

chemistry is a cornerstone on which other scientific disciplines are based such as biology, physics, genetic engineering, pharmacy, medicine, electronics, geology, oceanography and agronomy. Therefore, it is found in all fields of the applied science which marks the scientific and technological development.

It is clear that many areas are related to chemistry. For this reason, it is important to consider it in the curricula of engineering, so the students can become aware of the relationship that chemistry has with other disciplines, and its theoretical and practical application which represents a great challenge in the teaching- learning process.

Traditionally, chemistry has had a bad reputation among the people as a difficult and boring subject. Professors who teach it have noticed that the first reaction of most of the students that come from educative programs not related to chemistry is of annoyance and a complete blocking of communication with the teacher. The identified challenges are related to the withdrawal from the academic issue with the daily life which definitely have caused an indifference in some students who are learning chemistry.

For this reason, the professors must create learning environments that awakens and stimulate the interest of the students in chemistry.

Objective

The purpose of this paper is to share the most relevant findings of an educational research that allows access to the opinion of some engineering students from a Polytechnic University, regarding their experience in cooperative learning in chemistry.

Conceptual Framework

Regularly chemistry professors are professionals who were trained in an educative program with a bachelor's degree in chemistry or engineering. They try to apply the most effective teaching and learning process of chemistry. They also lead projects in the science laboratories, and are tutors of some students or curriculum developers. However in most cases, they have their first teaching experience at the university. As a result, they usually have lots of doubts and questions on how to start a class.

With this in mind, it is clear that chemistry professors face challenges to improve their quality of teaching. Therefore, it is important to recognize didactic instrumentation as an organization of a set of ideas and activities that allow the development of an educational process with meaning, significance and continuity (SEP, 2009).

The development of didactic instrumentation involves: analyzing and organizing educational content; determining purposes and intentions, setting and sequencing activities focused towards the achieving of the established objectives. Besides of coordinating these activities in time and space. This means to establish a full comprehensive action plan and have clear educative foundations which guide the entire process. (SEP, 2009).

Cooperative learning (CL) is also another methodological alternative Johnson,(1999) that can break out an educational paradigm which leads to an individualistic work among the students, and increase uneven competences among the young people with different characteristics, common aspects of the traditional education.

Consequently, different challenges are generated. One of them is found in the relationship between the academic themes and the daily life. Even though, this is not the only risk in the process, it must be considered as one of the most determinant causes that leads to visualize the lack of interest in some students to learn chemistry. Therefore, teachers must promote learning environments that awaken and motivate students. Hence, the importance to know the students perceptions regarding the usefulness of implementing cooperative learning in chemistry classes.

Research Methodology

In the development of the research, a mixed methodology was employed. In this respect, Hernandez, Fernandez and Baptista (2003:21) affirmed that the mixed designs "represent the highest degree of interaction or combination between the qualitative and quantitative approaches. Both are mixed or combined into the whole research process, or at least in most of its stages". They emphasize that mixed designs allow to obtain the best

evidences and understanding of the phenomena. Therefore, the opinions from the students are invaluable for the understanding of the processes taking place inside the classroom.

In this respect, Creswell (2008) states that it is possible to integrate in the same study, quantitative and qualitative methodologies in order to generate more understanding about the subject. In this case the main part of the research was to identify how the students perceive the cooperative learning, its advantages and disadvantages.

The population was of 250 students located in the first semester from different engineering. A pre - test with 22 items to identify the strengths and weaknesses perceived by students in the use of cooperative learning (CL) was applied. After the introduction of the CL, its effect was evaluated by using a post - test with 25 closed answer items and 3 open answer items with a random sample of 84 students. To detect effects from the perception of students about cooperative learning in the classroom, we took notes during the implementation of activities.

In this educational research, first we explored the strategies used to have a base in order to choose the one which will help to realize the intervention. Later, we apply the CL in four groups of chemistry. To close the process we used a second questionnaire for the students who participated in the experience of CL to find out how the university students perceived the cooperative learning, their advantages and disadvantages.

The first questionnaire (Q1) was designed with 22 questions in the Likert scale with four answer options (never, very little, sometimes and frequently). It was applied to a sample of 250 students located in their first period, May-August 2013, to identify the strengths and weaknesses perceived by students regarding the strategies used during class. The validity of this test showed 0.93 on Cronbach's alpha.

Results and Discussion

In the first stage of the educational research, the most difficult subjects in first grade were detected as perceived by the students, are shown in the following, see Fig.1.

Table 1 Difficult Subjects

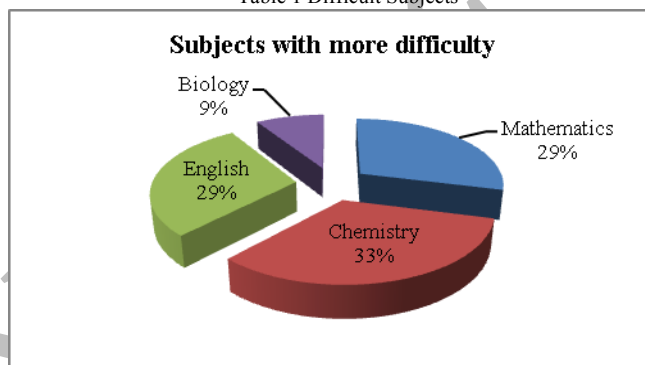


Fig. 1. Student opinions.

In Fig. No. 1; you can see Math, English, Chemistry and Biology, as the most difficult subjects identified by the students.

Similarly the strengths and weaknesses in the didactic instrumentation chemistry was detected, as shown in the following, see Fig. No. 2

Table 2 Didactic Instrumentation in Chemistry

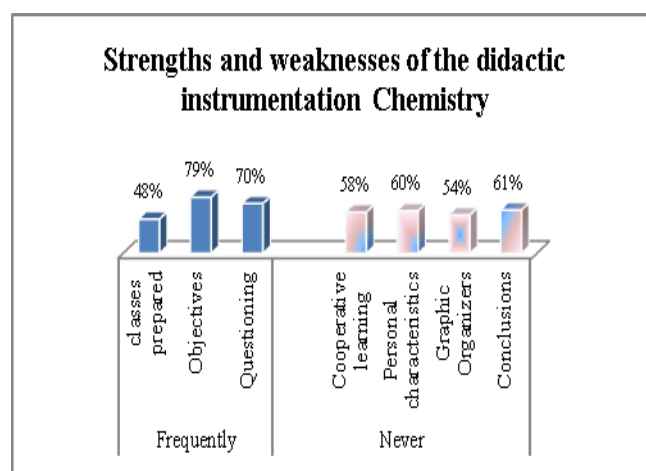


Fig. 2. Student opinions.

Based on the results from the first questionnaire, CL strategy was selected to implement in groups because it was one of the less frequently used, in addition to its potential benefits within the classroom. We consider five basic elements that guided this alternative methodology: positive interdependence, interaction that promotes; individual and group responsibility, social skills training, and a review of group process, from Jhonson (1997) brothers.

It was observed that organic chemistry subject was the most difficult, as perceived from the students; and the second most difficult was the subject of Instrumental Analysis. In a second moment the students identified strengths and weaknesses of the use of CL in their classes;

In the pretest, we found that 60% of the teachers used mainly the interchange of opinions through questions and answers.

After using CL, the post-test results showed how relevant students' opinions were, because they were able to: spend more time studying properly; improve their attention; compare ideas to learn more; reduce workload and encourage understanding and reflection from the topics and their practical application in their daily life.

The attendance records showed that both, teachers and students appreciated the advantages of cooperative learning. However, in some situations the difference between the individual, competitive and cooperative work is not clear yet.

In Chart No. 2; you can see from the scale used that 48% confirmed that teachers often prepare carefully their classes, 79% explain the objectives and 70% use the method of questions. On the other hand, it showed that 58% never utilize cooperative learning, 60% do not consider the personal characteristics from students, 61% said they are not able to finish their classes thoroughly, and 54% do not supported their classes using graphic organizers to explain different topics.

Students pointed out several reasons why they fail: lack of the basic knowledge; lack of good habits to study; accelerated dynamic of the courses and overdoses of homework in some subjects.

They also emphasized that one of the main factors for some students is the lack of financial resources in their homes and the lack of interest they perceive in the teaching of a subject.

The students suggested that classes could be more enriched with practical activities to understand the theory easily and mainly focusing them to their area of study and their everyday life. As well as to provide an individual attention in the classroom, a factor that emerged with the CL. They ask to have a more detailed and diversified lesson plan with different strategies, so the contents can be analyzed with more detail.

It was noted that CL facilitates positive interdependence of tasks when planification is detailed and promotes the importance of each student activity to interchange and develop their critical thinking, and enhances attention of the different personal characteristics of students as shown in Figure No. 3

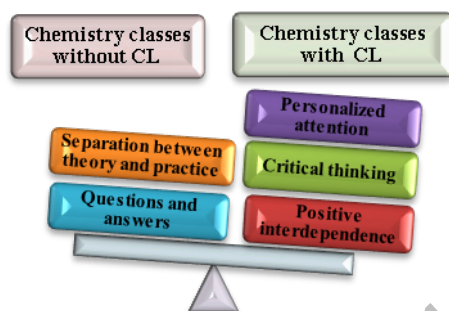


Fig. 3. Student opinions.

Conclusions

The findings in the first phase revealed the didactic instrumentation research from the students studied is in a transition process because there are still methods and techniques, characteristics of the traditional education. It requires awareness in the organization of teaching in the universities which work in models based on competences development. It implies to focus in the development of the construction of student learning, relating it to the logic of the various disciplines in the employment context in which future graduates will be inserted. Traditional team work lacks of individual responsibility, which leads to inequality in terms of work and commitment invested. It is possible to find students doing most of the work while others contribute very little or do nothing. They "lack of equal participation" (Kagan,1994:25).

For that reason, teachers must incorporate different methodological designed options to promote higher-level cognitive processes and processes of creative and critical thinking of the various contents. This is the only way, university teaching can become a significant formative impact on the holistic formation of the student.

Therefore, it is required that teachers should be able to plan and create active learning environments such as CL; and encourage students to acquire and construct knowledge through their study and bonding with their daily life.

This educational research helped to identify strengths and challenges of implementing the CL based on the UPP educative model to establish meaningful scenarios in teaching chemistry model. Students and teachers identified the usefulness of this alternative methodology to promote chemistry subjects of positive interdependence. An aspect that emerges when all group members are aware they cannot succeed unless their classmates are able to reach it too. If they consider the effort made by each student, benefits himself and the others, (Johnson,1994:34).

Positive interdependence allowed that the interchange and coordination of activities move groups to generate critical and controversial issues that help to understand the subjects better and bring on to improve student learning and facilitate the connection between scientific and everyday thought.

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INTE 2014

Co-parental couples and new families: A study of the primary triad

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Abstract

Starting from current areas of research in the field of developmental theories, the aim of this work is to analyse parent-child interactions within a primary triad and to consider co-parenting couple and their children as an interactive matrix. In particular, parent-child relationship could be observed through new developmental units of observation and coding systems in the multiple scenarios of new families. The deepening of this study may promote an effective connection between research and educational support as well as clinical work with families and parental couples.

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Peer-review under responsibility of the Sakarya University.

Keywords: co-parenting; triadic assessment procedures; new familiar figures; couple; parent-child relationships.

Introduction

The aim of this article is to examine couples and family dynamics, going beyond dyadic observational units (e.g.: mother-child or father-child dyads). In particular, the focus is on the primary triad - formed by two parental partners and their child - and from this perspective the issue of whether it is possible to identify new procedures for evaluating and supporting parental couples as well as current familiar figures.

The observation of parent-child relationships and the outcomes of their developmental paths were, in fact, mainly focused on mother-child or father-child dyads and on the “monotropy” concept: children are genetically programmed to form attachment bonds to a single caregiver and to refer to an innate and unique orientation to the primary attachment figure (Bowlby, 1969).

Without meaning to diminish the importance of Bowlby’s framework, the triadic unit is instead conceived as an interactive matrix that does not overlap with the dyadic experience and provides a better understanding of the reciprocal self-regulation process during parent-child interactions (Mc Hale, 2007).

This matrix scheme is also at the base of the coparenting issue, such as the ability of both caregivers to coordinate the exercise of their co-parental function. It may be moreover extended to the study of significant trends and changes which have characterised the new living together and then to the clinical work with couples and families (Salerno, 2010).

Toward the “intersubjective triangulation” perspective

A current area of research in the field of developmental theories is going beyond the concept of monotropy (Bowlby, 1969) and pays close attention to the emotional ties that the child builds with multiple reference figures (i.e. the other parent, grandparents, educators; Cassidy & Shaver, 1999). In particular, this area explores the passage from the observation of the mother-child dyad to the father-mother-child triad and underscores that infants are more often in multipartite contexts than they are dyadic ones (Schaffer, 1984; Dunn, 1991; Trevarthen, 1993; Belsky, Putnam & Crnic, 1996; McHale, 1997). This finding highlights a child’s predisposition

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to handle more than one primary relationship and represents the ability to create in his/her mind an idea of the network of relationships to which he/she is bound by.

Moreover, several theorists (Emde, 1990; the Lausanne group coordinated by Elisabeth Fivaz-Depeursinge and Antoniette Corboz-Warney, 1999; Mitchell, 2002; Favez et al., 2006) provide new evidence about a collective and primary form of early intersubjectivity, conceived as the child's capacity to share in others' feelings and mind-states. The innovation of these studies lies in the introduction of the "triangularity" concept as well as "intersubjective triangulation" one. Within this perspective, the study of the family is not possible only through its dyadic components but starting from a triadic unit where child's socialization experiences are fundamentally affected by how adults work and coordinate together in the relationship with their sons (Mc Hale, Fivaz-Depeursinge, 1999). In all families, children are in fact raised by more than one adult caregiver and the family establishes a signature co-parenting relationship.

Co-parenting is therefore conceived as a parents reciprocal regulation, related to the growing child's needs. McHale's current research (McHale, 2007), in particular, demonstrates the central role of the family alliance between parents in the development and adaptation of the child: an alliance is defined as productive when partners are able to communicate regularly on issues and decisions that affect the child and to support each other on parenting efforts and the family alliance is the capacity of the mother-father-child triad to be engaged in the interaction while coordinating their actions and signals and working together as a team toward a common goal showing pleasure and flexibility, seeing things from the child's point of view.

Fivaz-Depeursinge and colleagues have also discovered that babies (already at 3-4 months postpartum) may possess clear capacities for coordinating their attention and affects between two partners simultaneously as an emergent "triangular capacity". The primary triangle (from which the *Lausanne Trilogue Play*, LTP) is based on a triangular coordination that takes into account the ability of the parental couple to co-regulate their interactions. The triangular coordination is an important variable compared to both developmental theory and clinical work with families. From a triadic background, partners' ability to communicate with each other as well as to co-regulate their interactions through their own emotional experiences is emphasised. The intersubjective triangulation allows us to analyse the main strategies of the child connected to the different types of parental response: "it is above all the intersubjective communion level, established by parents' responses, to differentiate these different types of triangulation" (Mitchell, 2002, p. 121).

Co-parents can provide similar or very different interpersonal experiences for babies, support one another's parenting efforts, or interfere with them. The parenting adults can each provide substantive and recurring engagement for babies or collude to shunt most effort to one parent to the exclusion of the other. It is such patterns of support, cooperation, coordination, opposition, and detachment in the family's coparenting relationship that coalesce and collectively come to define co-parental solidarity in the family. Such patterns are firmly established by 3 months postpartum, show remarkable stability across developmental time, and, most importantly, ultimately come to have an imprint on toddlers' and young children's social and emotional development (McHale, 2007).

Within this perspective, co-parenting, family alliance and the triangular coordination become key concepts.

Parental experience is in relationship to the child but it is also determined by the way a parent experiences the relationship with his/her own co-parental partner and how he/she perceives the relationship between the co-parental partner and the child. For example, when a parent hugs a child he/she will offer a different holding style depending on these experiential factors.

Consequently, the primary triangle concerns more relationships than behaviours. In other words, the development is not perceived as something that just happens only to the child but as something that evolves between mother-father and child. As part of this triangular relational perspective, it is therefore the relationship between parental partners that plays a regulatory function for both the mother-child and father-child relationships: "being oriented toward the presence of the other as co-parental partner is the *conditio sine qua non* of a functional and creative affective triangle" (Salonia, 2012, p. 27).

Co-parenting in the new familiar figures

We should wonder how the triadic perspective could help to provide new keys of understanding and operating in educational as well as clinical work with new couples and families.

Specifically, the current panorama of family realities - characterised by the pluralisation phenomenon (Fruggeri, 1997) - shows new assets of the traditional roles division between women and men inside and outside their home environment. The social and cultural changes, in fact, have facilitated both the entry of women into the public world and at the same time pushed men toward the context of domestic walls.

Moreover, these new trends have also made a redefinition of the meaning of becoming parents as well as of the practices of care of offspring. The current cultural attitude is in fact reinforced by a key element that characterises the transition to parenthood: the choice of generating as well as the choice of the non-generating. If in the past the transition from married couple to parenthood happened so soon and easily, today some couples avoid procreating at all costs (Salerno, 2010). This kind of couple (Childfree couple; Tanturri & Mencarini, 2004) is characterised by a voluntary decision to not have children.

Another example of these transformative familiar trends, is the Living Apart Together (LAT) couple. This type of couple chooses to maintain two different homes and without necessarily sharing, planning and getting married. In regards of these new familiar models, some questions to how to combine a conjugal relationship with a not generative choice or even parenting without cohabitation are emerging.

For examples, with these couples is not living together more a choice or an obligation? Or is it more induced by a feeling of fear on marital and parental functions? Exploring these experiences could be a way to better understand the dynamics of these new couples. More questions could spring to mind: how to combine parenting without cohabitation or even a conjugal relationship with a "non-generative choice"? How much are these choices free of the past and of painful experiences?

The construct of co-parenting can provide attempts to answer to these questions, moving towards theoretical horizons and family dynamics in which the function of co-parenting could be always contemplated.

According to Salonia (2009), co-parenting reflects the quality of parental partners relationships in terms of the function Personality of the parental Self. This function refers to two registers: "being parents of" (I am the father or the mother of this child) and "being parents with" (I am the father or the mother of this child with this mother/this father). Thinking of a significant correlation between the experience of a parent towards the child and in relation to the other parental partner is important, because a dysfunctional relationship with the parental partner could lead to dysfunction in the relationship with the child. According to this declination, in a parental couple it should be clear how to activate the function Personality of "being parents with". The work with the function of co-parental Personality of the Self could bring both partners to support each other, in their experience of being parents with one another and when carrying out main clinical work with this type of couple, it is important to talk about the couple's experience and to use the co-parenting key of interpretation.

The construction of co-parenting could provide attempts to answer, moving towards theoretical horizons and family dynamics in which the function of co-parenting is conceived. For instance, for those couples who are struggling to live together or stalling to procreate or that have experienced suffering and solitude, co-parenting and parenting alliance could be key in terms of a relational discovery, allowing the door to open to different family-life scenarios.

Conclusions

The full implications of coparenting (McHale, 2007) and triadic (Fivaz-Depeursinge & Corboz-Warnery, 1999) theories have yet to fully penetrate the fields of infant and child development. Both research and clinical studies of infants continue in fact to be structured by dyadic (mother-infant) socialization models, principally because infants' earliest socialization and acculturation experiences are largely dyadic in nature.

Moreover, the triangular structure leads to some reflections on new observational units to work with the current ways of living together, characterised by multiple forms and a different level of complexity. Co-parenting between parents becomes fundamental in the developmental task of caring where both parental partners face each other, expressing different styles or alliances, in the co-presence of the maternal and paternal principle.

Co-parenting methods also highlight preventive interventions mainly focused on an earlier identification of risk or disease throughout specific procedures of reception, assessment or support for parental couples. The main point is, of course, which clinical implications might be found and discussed.

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Corpo/realities in times of educational crisis: Trauma, consumption and dialogue in *Au Revoir Les Enfants*

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Abstract

There are numerous Holocaust documentaries, novels, memoirs, and movies depicting the endangered lives of Jewish children during World War II. As viewers and readers, flipping the pages or watching the images onscreen forces us to consider our place in relation to those individuals who have seen the unthinkable. We consume their stories, their testimonies – their vivid remembrances which transcend the place and space of fading-memories to become re-imagined, and lived-again through the painful acts of telling. We become witnesses to the stories told by these witnesses of true horrors (Felman & Laub, 1992). Louis Malle's (1987) film *Au Revoir Les Enfants* forces us, as viewers, to undertake this difficult task through the eyes of a nearly-silent protagonist – a Jewish boy named Jean Kippelstein, hidden in a private Catholic school in Vichy France by the school's headmaster, Father Jean, in 1944. The relations between Father Jean and his pupils are all complex and unravel over the course of the narrative, culminating in a final tragic scene with fatal consequences.

I contend that for filmic testimonies such as *Au Revoir Les Enfants*, the body of the endangered Jewish child is the operational and educational site of trauma. The narrative is fully able to “make the suffering body the small, focused universe of the tormented and a vehicle for rendering unimaginable experience tangible to readers” (Vickroy, 2002, p. 33) as it stands-in for an immeasurable collective experience. Describing acts of consumption signposted throughout the film, I assert that *Au Revoir Les Enfants* stands in as a social and bodily topography of education in times of crisis. The film works subtly to remind us that the trauma of the Holocaust is a collective as much as personal experience; it forces viewers to construct an ethical and critical consciousness about events otherwise washed away through time, dangerously finding redemption through history's fading memory.

Taking place in a school where bodies are literally made uniform by dressing alike, the body of the Jewish child stands out as the site of displacement, dysfunction, perhaps even dys-embodiment –embodiment that is not quite right, that is called into view and put into harm's way. Bodies in this film are writ large in the classroom and become the site/sight of education about the im/possibilities of universalizing the bodily experience. Treatments of the body become visceral narratives that tie together layers of national and personal trauma. Employing Leder's (1990) argument about the dis-appearing/dys-appearing body, I interrogate the filmic signposting the body as simultaneously consumer and consumed, excessive and grotesque, and ultimately, wholly transgressive.

However, I also suggest that films such as *Au Revoir Les Enfants* remind us about the possibility of opening up the educational dialogic (Buber, 1947/2002) on account of the body's powerful, central place. This is not to say that the transgressive body can be saved; rather, that the film forces a reflection about the possibilities of learning about alternate life experiences – including danger, death, and disability – through the bodily conditions inseparable from those who experience them. To that end, the relationships in the film illustrate both the possibilities and failures of the dialogic within education at its most vulnerable times and in its most endangered spaces.

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Peer-review under responsibility of the Sakarya University.

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Introduction

Melancholic as it may be to ask, what does it mean to consume, if not enjoy, trauma? What does it mean to say, “I love that movie, *Au Revoir Les Enfants*” (the artefact under discussion in this article, which is about death and inhumanity experienced by children during the Holocaust)? In a time of pure simulacrum and hyper-representation, what does it mean to witness trauma and such inhumanity in and through a work of cinematic representation? Modestly, I aim to engage and dialogue with these questions. To bear witness, I am arguing, is a solemn act that requires vulnerability and openness on the one hand; and requires, on the other, a “work of mourning” (Douglas & Vogler, p. 48), where one is to ask: how do we go on living after witnessing trauma? If “[n]o one bears witness for the witness,” as the French writer and Holocaust survivor Elie Wiesel put it (cited in Felman, 1992, p. 3), then “[t]o bear witness is to bear the solitude of a responsibility, and to bear the responsibility, precisely, of that solitude” (Felman, 1992, p. 3).

The number of documentaries, novels, memoirs and movies depicting this solitude of endangered lives of, especially, Jewish children during World War II is ever exponential. As texts that are bearing witness, Douglas and Volger (2003) argue, one remarkable feature that knots most of these texts is their ability to pull us-readers-and-viewers into their narrative, a narrative that is penetrated by an experience of bearing witness to the horrors of history. We are forced to consider our place beside those who have seen the unthinkable, who have been able to reach inside themselves to understand what they have witnessed. We consume their stories, their testimonies – their vivid remembrances which transcend the place and space of fading-memories to become re-imagined, and lived-again through the painful acts of telling. In the end, we become witnesses to the stories told by these witnesses of true horrors. By reading the memoirs and watching the films, we come to bear witness to the nightmare made tangible through difficult words on the page and the images onscreen.

Even in this age of iPods, tablets, and internet videos, as educators, we notice books such as Anne Frank’s infamous and timeless memoir still circulating in elementary and junior high school hallways, carried in the hands of young students emerging from English classrooms, read in the corridors between lectures, and discussed at lunch tables. There is something which captures the imagination about the story of the individual in danger from cultural persecution which has an ethereal quality. In the case of *Au Revoir Les Enfants*, this quality is a way of allowing viewers to enter the horrific space of Holocaust memory and trauma. Felman and Laub (1992) get underneath the effects of reading (and in our case, viewing) by asking, “is the act of reading [viewing] literary [or cinematic] texts itself inherently related to the act of facing horror?” (p. 2, original emphasis). They explain that, while “the burden of the witness...is a radically unique, noninterchangeable, solitary burden..... the appointment to bear witness is, paradoxically enough, an appointment to transgress the confines of that isolated stance, to speak for and to others” (ibid., p. 3). The work of films, literature and poetry about the Holocaust, I argue, demands that readers and viewers today reach into the experience of the individual, to access a truth that is unbearable, and to bear witness to the breaking of silences, to the transgressions of solitude, to listen astutely to the testimony of those who have witnessed history’s horrors. To that end, Louis Malle’s (1987) film *Au Revoir Les Enfants* asks us as viewers to undertake this difficult task through both the eyes of a nearly-silent protagonist – a Jewish boy named Jean Kippelstein, and his friend Julien Quentin – a Catholic schoolboy who witnesses Jean’s life in hiding.

An aporetic representation: witnessing the witness

Au Revoir Les Enfants is set in a private school run by monks in a small town in France in 1944. At the beginning of a new semester, three children are enrolled by the headmaster, Father Jean, and the audience recognizes that they are Jewish – given new names and identities to hide them from the Nazis and Vichy Regime. One of the children, Jean Bonnet (whose real, Jewish name is Kippelstein) befriends a Catholic boy named Julien. Jean and Julien are not particularly popular, somewhat dreamy – fantasizing about girls, and reading stories of the

Arabian Nights and *Three Musketeers*. Jean and Julien spend time playing, studying, and even getting lost one day during a game in the woods – an event which brings them closer together. Soon after, Julien discovers that Jean Bonnet is not his friend's actual name, and a few days later, when out for lunch with Julien's mother at a restaurant in town, the boys witness an anti-Semitic incident with a long-time patron of the restaurant who is confronted by police. The audience does not receive any more direct information about what Julien presumes or believes about Jean, but soon thereafter, the three Jewish boys, including Jean, are betrayed by a disgruntled, disabled ex-employee – Joseph the kitchen helper. In the final scene of the film, Julien watches helplessly as Jean, the other boys, and the headmaster, are taken away by the Gestapo to concentration camps.

Undoubtedly, this film like other Holocaust films, comes up against the same warning uttered by Adorno about writing poetry after Auschwitz – namely that a general state of aporia hovers over acts of representation, or as Martin (2006) asks, if the double layers of aporetic anxiety might ever be resolved through representation in ways which paradoxically “produce the knowledge of its own impossibility.” Hartelius (2011) contends that the rhetorical challenge in creating narratives which adequately represent the traumatic reside in the ability “to create an intelligible discourse out of the traumatic event” (p. 73) especially when “words seem to fall short” (p. 89). Indeed, trauma at the level of the Holocaust silences us as writers, and as viewers of films like *Au Revoir Les Enfants*. Yet Hartelius (2011) also reminds us that witnessing itself is a rhetorical creation, and so one might ask about the productive space of anxiety, of the aporia which confronts us as that which both requires and refuses representation, that simultaneously demands articulation and reminds us of its impossibility.

Bearing in mind the kind of aporia any kind of Holocaust representation creates, I am mindful of the argument made by LaCapra (2001) and Vickroy (2002) that the representational capacity of trauma fiction can be powerful. *Au Revoir Les Enfants* opens up a space where the onscreen story of Jewish children in Vichy France can be remembered, and where the potential silencing of the narrative about Jewish French children during World War II might be counteracted by employing fiction which acts as a truth-telling device. Felman and Laub (1992) explain that “[i]n literature as well as in psychoanalysis and conceivably in history as well, the witness might be... the one who (in fact) witnesses, but also, the one who begets, the truth, through the speech process of the testimony” (p. 15, original emphasis). To that end, *Au Revoir Les Enfants* works subtly to remind us that the trauma of the Holocaust is a collective as much as personal experience; it forces the viewer to construct an ethical and critical consciousness about events otherwise washed away through time, dangerously finding redemption through history's fading memory. Holocaust narratives are the sinews between layers of national and personal trauma.

For this film, I contend that the body of the endangered Jewish child is the operational and educational site of trauma. The irresolvable disharmony and friction between bodily experience and psychological trauma explodes outwards from the child to the Jewish community as a whole, and echoes as a crisis at the level of humanity. The bodily experience of the individual transplants itself into the social world in a way articulated by Stallybrass and White (1986):

...the body cannot be thought separately from the social formation, symbolic topography and the constitution of the subject. The body is neither a purely natural given nor is it merely a textual metaphor, it is a privileged operator for the transcoding of these other areas. (p. 192)

In other words, a film like *Au Revoir Les Enfants* is able to “make the suffering body the small, focused universe of the tormented and a vehicle for rendering unimaginable experience tangible to readers” (Vickroy, 2002, p. 33) as it stands-in for an immeasurable collective experience. Using acts of consumption signposted throughout the film, we consider *Au Revoir Les Enfants* to be a social and bodily topography of education in times of crisis. Taking place in a school where bodies are literally made uniform by dressing alike, somehow the body of the Jewish child stands out as the site of displacement, dysfunction, perhaps even dys-embodiment – embodiment that is not quite right, that is called into view and put into harm's way. Bodies in this film are writ large in the classroom and become the site/sight of education about the im/possibilities of universalizing the bodily experience. Employing Leder's (1990) argument about the dis-appearing/dys-appearing body, we interrogate the filmic signposting the body as simultaneously consumer and consumed, excessive and grotesque, and ultimately, wholly transgressive. Yet we also suggest that possibilities for opening up the educational dialogic exist (Buber, 1947/2002) on account of the body's powerful, central place in the film. This is not to say that the transgressive body can be saved; rather, that the film forces a reflection about the possibilities of learning about alternate life

experiences – including danger, death, and disability – through the bodily conditions inseparable from those who experience them.

The traumatized and transgressive body

Leder (1990) provides a starting point to think about the concept of embodiment and, specifically, how the body opens itself onto the world. Suggesting that our bodies engage the world directly, Leder explains that this “recessive” body allows us to actively interact with others – the body is put forth into society as the surface that touches and reaches the world directly. But he suggests simultaneously that our viscera, primarily the eye as the perceiving organ of the body, causes a phenomenological loss, a bodily disappearance. The eye is unavailable to our consciousness and our direction, and thus recedes from direct control. In both cases, the body disappears from our view. Our experience of our bodily organs is reductive, spatially ambiguous, and discontinuous across geographies and time. And Leder further suggests that we “do not perceive from these organs; hence they can hide beneath the body surface such that I do not perceive to them either” (p. 44). In other words, the body operates as an “it” more fully than it does a cognizant and aware “I.” As Heidegger suggests in his philosophy of *dasein*, we thus enter the world from the womb with unknown and ambiguous origins. Leder accuses the body of being foreign, and not merely a container for a Cartesian concept of consciousness. He asserts, “I cannot even claim my own cells as fully my own. In all probability, they evolved out of symbiotic relations between different prokaryotic cells, one living inside another. My body everywhere bears the imprint of Otherness” (p. 66).

As the body generally recedes when functioning adequately, Leder suggests we become fully aware of its capacity during times of dysfunction. Bodily inattention is disrupted and becomes problematic when we are confronted with pain, illness, disability, and death – and the social phenomena that might cause these disruptions. We are confronted with both hermeneutical and pragmatic conflicts: suffering asks us to search for reasons, meaning, and causality alongside the desire to seek relief – a cohesive way to act toward the body. This is what Leder calls *dys-appearance*, a state of being thrust into a state where the body fails to *dis-appear* and instead confronts us head-on. The Cartesian rational mind in its perpetual disembodied state is plucked out of its comfortable duality. As Kleinman (1988) explains, when the body is ill, “[w]e feel under siege: untrusting, resentful of uncertainty, lost. Life becomes a working out of sentiments that follow closely from this corporeal betrayal: confusion, shock, anger, jealousy, despair” (p. 44-45). When watching at *Au Revoir Les Enfants*, I am fully confronted with such bodily betrayals, and am faced with the ways in which the body is thrust out in the open for all to consume. The trauma of imminent death becomes a crisis of life, and as a viewer who inevitably share the ontology of human embodiment that Leder advocates, I feel the ongoing pain of those who simply cannot *dis-appear*. The universalizing experience of embodiment is turned upside down as we are torn from the way we experience our bodies (as absent) to the way traumatized and threatened bodies erupt onscreen – made imminently manifest, impossible to “disappear” despite all efforts. In particular, this film places two kinds of bodies onscreen who *dys-appear* in recurring fashion: the crippled body of Joseph, the kitchen helper, and the endangered Jewish body of Jean, an orphan posing as a French Catholic schoolboy to avoid certain death.

When watching *Au Revoir Les Enfants*, we as viewers feel danger for Jean Kippelstein throughout the film, arriving on the viewing “scene” with prior knowledge about World War II. The audience is aware of Father Jean’s secret of saving the Jewish boys right away, and we carry this knowledge throughout the film well before Julien discovers Jean’s real identity. As well, it is clear that the dissolution of the school’s structure and relationships is a microcosm of the larger war. The experience of war-time puts bodies in full view: as soldiers who are killed, the bodies of Jewish survivors who are hunted down and executed, and those who cannot participate in the war effort (the elderly, crippled, children). As the school and its internal conflicts escalate towards finalizing solutions, especially Father Jean’s expulsion of Joseph the kitchen-boy for trading the boys’ gifts of food on the black market, leaving him with nowhere to live (in contrast to the schoolboys who are only punished by losing their holidays), we are reminded of the fighting going on in France as a series of betrayals, such as the French Vichy soldiers attempting to rid their town of Jewish people, as seen in the restaurant where Julien and Jean are taken to dine and where a long-time Jewish patron of the restaurant is confronted and asked to

leave. The Jewish body is writ large as excessive, indeed Jewish bodies are in excess, and their impossibility to dis-appear is imminent. The facets which make individuals Jewish – their bodies, their language, their habits, and ultimately their official papers and mandatory Star of David sewed on their clothing – become sites of dys-appearance. And these early scenes in the film remind us of the Final Solution, which ultimately consumes Jean in Auschwitz a few months later when he is discovered by the Gestapo.

Father Jean, the school's headmaster, seems to understand the position of Jewish children, as we see in his sermon asking parents of the schoolchildren to avoid hoarding wealth and food and to share with everyone, and to rally together as one united force against sentiments that divide people based on social class and religion. But even at the chapel, some parents disagree, and leave the service. They come together to distinguish themselves from the Jewish body, cleansing themselves of a group that is both silent and absent at the meeting. Solidarity for the moral good of all is far from a possibility among parents, and as an extension of their parents' views, the French schoolboys only rally together to mob their easiest victim, Joseph, whom they mock, beat, and push down. He is not Jewish, but is the crippled kitchen-helper, a perpetual outsider who will never attain legitimacy and who represents himself loudly and vocally about his feelings of expulsion and consumption, declaring after being surrounded and beaten, "I am not a dog!" Joseph, tender of pigs, dirt, and food scraps, reminds us of the "low other" in Bakhtin's analysis of the carnivalesque. Far from the positive experience of freedom and wilful degradation (an inversion and joyful mockery of official feudal culture), Joseph is fully relegated to the margins without celebration. His limp and inability to join the war as a soldier or resistance fighter renders him perpetually in a state of dys-appearance. Joseph's bodily excess – his disability – reminds us of Douglas' (1970, 1980) writing on taboo and pollution. Douglas explains that 'dirt' symbolizes disorder, but there is no thing as dirt in absolute terms. It is merely immaterial, unwanted "stuff" that is out of place. Indeed Joseph is the lowest social figure in the film, and a recognition of his place as 'dirt' functions in the same way that Douglas explains – as that which pressures boundaries on account of always being in the wrong place, unwanted, and which demands re-ordering. If the categories of social class, gentile/Jewishness, religion, and schooling are all marked by boundaries, Joseph is the figure who moves between them – selling his wares to the "high" class of French Catholic students, while trading their goods on the black market. It is on account of being a "low-Other" (Stallybrass & White, 1986, p. 5) that Joseph is so essential to the film. High culture's dependency upon the low opens up a

...mobile, conflictual fusion of power, fear and desire in the construction of subjectivity: a psychological dependence upon precisely those Others which are being rigorously opposed and excluded at the social level. It is for this reason that what is *socially* peripheral is so frequently *symbolically* central. ... (Stallybrass & White, 1986, p. 5, emphasis in original)

Indeed, Joseph upsets the social order through his paradoxical mobility – he cannot move well physically, but he slips between social classes, low places and official circles, all the while having his body marking him as Other. Yet as Douglas (1980) contends, that which pollutes – in this case, the liminal body of the transgressive Other who moves between social and physical spaces – forces reflection about the relationship of "order to disorder, being to non-being, form to formlessness, life to death" (p. 6). Joseph gains legitimacy by being the natural and essential opposite of those in "high" places, by those he serves: at first, the French schoolboys for trading of their black market goods, and ultimately, the Gestapo for Joseph's information about the boys being hidden at the school.

Jean Kippelstein, feeling the same initial fears as Joseph about being surrounded and consumed by the schoolboys, remains silent in the face of Joseph's treatment and his own mockery when he is first brought to the school. Jean might similarly be considered abject – the body out of place who pollutes the tidy school system, rendering it out of order. After all, Jean's parents cannot attend the chapel service and dinner hosted by the monks because they have already been consumed by war – they've been executed. Only Julien recognizes Jean's difference, his bodily dys-appearance, first quietly, and then by probing Jean by asking a few questions. Even through his naïve questioning, he begins to recognize the danger felt by the Other – asking him if he feels scared, to which Jean replies "all the time." The question of his Jewishness never becomes a full conversation. Instead it is understood by Julien; he feels the danger surrounding Jean even though he doesn't understand it fully. Strangely, he "recognizes" the other boy's legitimacy, somehow recognizing the Other's bodily dys-appearance perhaps on account of his unawareness of his own dis-appearing, safe body. Julien lives vicariously through

Jean's fears and feelings. This is most evident when the boys get lost during the bandana game while hiking and Julien asks, "are there wolves in these woods?" They get frightened together when a wild boar approaches them, and for a moment share the fear of being consumed by wild animals. A transgressive space opens up for a moment, where Julien enters the world of Jean's abjection, unaware of the larger danger faced by Jean symbolized in their momentary fears of being lost. Ironically, German soldiers pick them up, telling them not to worry because they're "Bavarians and [also] Catholics." Later, when questioned by the other boys, Julien exaggerates his story like the adventure tales he reads in *The Three Musketeers*, saying that there were five hundred boars and the Germans fired shots at them – neither of which actually happened. Jean, feeling no need to exaggerate the story or his close encounter of being consumed by the real enemy, remains silent.

Bodies in motion: signposting Buber's dialogic

I might suggest here that Julien's absent body, the safe body of the French Catholic child who can dis-appear, enters the space of the low, the abject, the transgressive dys-appearing body during this time of crisis (the threat of execution upon Jean as he hides in the school.) How is this possible and why is it important? I posit an educational perspective, invoking Martin Buber's concept of the dialogic to understand movement within the space between the non-threatened dis-appearing body and the dys-appearing body in imminent danger so that I might explore the possibilities presented, and sometimes denied, by dialogue that is not uttered but rather written onto the body of students facing danger and persecution in classrooms, and in schools under duress. Students' utterances, as we have seen, are not always verbal. Their bodies become more than the sight of education – orderly, uniformed, in rows. Bodies become the very site where the horrors of the world are written into the microcosm of the classroom – as the child abandoned, bullied, orphaned. In this film, the horrors of war echo loudly into the learning space. What possibilities exist for students like Jean to be heard, to be seen. Moreover, when students' status as Other is known, writ large, and reinforced, how might the caretakers of the educational space – its teachers and headmasters – engage with the student most abject, most reviled?

In his address at the Heidelberg conference in August 1925, Martin Buber (1947/2002) asserted that "the relation in education is one of pure dialogue" (p. 116). By this, he was referring to the relation between teacher and student as one grounded in a "subterranean dialogic," (ibid.) or an inclusive relationship. The definition of inclusion, Buber explains, is how one can come to know (an)other physically and spiritually, but not merely through empathy. Inclusion is an extension of the self rather than the desire to imagine oneself in another person's situation, to merely transpose the self into another set of conditions. Rather, it is how the self experiences a common event or moment with another person as an extension of the self (without losing a sense of self). This is to say that a "person, without forfeiting anything of the felt reality of his [sic] activity, at the same time lives through the common event from the standpoint of the other" (p.115). A relationship of inclusion is a dialogical relation and stands apart from monologue, where there is complete failure to open oneself up to the o/Other. Generally speaking, relationships between people are marked by power relationships (see Foucault, 1979), and these are monologic because discourses of power entrenched in the hierarchical order are largely immutable. By contrast, the dialogic opens up possibilities for learning by two people perceiving reality from distinct, yet simultaneous positions. This is "what makes it possible to meet and know the other in his [sic] concrete uniqueness and not just as a content of one's experience" (xiii, Friedman in Buber, 1947/2002).

There are three forms of Buber's dialogue. The first is when each person in the relation becomes aware of the other's "legitimacy" (p. 117) and is able to acknowledge the other through "necessity and meaning" (ibid.). This is not merely a recognition of the other's position relatively speaking – as an alternate truth. Instead, it is a wholly encompassing recognition of the position of another as an extension of our own being, and helps to fulfill us through the act of recognition. Julien exists in a seemingly liminal space between his own unthreatened position and Jean's endangered one. While Jean has more depth of experience in the face of trauma than Julien, and teaches his friend about the world most often by remaining silent, Julien experiences the education of this teacher-figure, his new friend Jean. What is left unsaid creates a space of learning about the world. As audience, we learn a great deal about inclusion. The film itself is monologic by design. Its power over the audience as a "text"

demands consumption. But the viewer experiences loss, recognition, and mutuality with the characters onscreen, especially Jean, with whom we not only sympathize and feel danger, but seemingly come to know. The dramatic quality of film-watching gives us the knowledge of what Jean already knows long before Julien is able to recognize the inevitable – that Jean will be captured and killed. The audience is thus like a pupil early-on in the teacher-student relationship; viewers can only passively acknowledge the truth about Jean's fate as the story unravels. As the film progresses, audience members co-evolve as pupils who learn about society, war, and the Final Solution through the eyes of its young victims.

Buber's second concept of dialogue introduces the reader to inclusion in education more fully. He explains that the teacher experiences a student's education first, and often the reverse does not happen for some time. However, the dialogic is fully achieved once the student experiences the teacher's learning, leading to a mutual recognition of growth and co-evolution as learners. We contend that the relationship that emerges between Jean and Julien is made possible through Julien's symbolic entry into the bodily space of Jean's dys-appearing body. This is demonstrated foremost in the film as acts of consumption that teach Julien about the world outside the school. I take up Stallybrass & White's (1986) contention about the symbolic importance of the body in narrative and history, proposing that the carnivalesque (excessive) body:

...mediates between a classical/classificatory body and its negotiations, its Others, what it excludes to create identity... In this process discourses about the body have a privileged role, for transcodings between different levels and sectors of social and psychic reality are effected through the intensifying grid of the body. (p. 26)

Au Revoir Les Enfants is full of hints and references about the place of the body as a symbolic structure which organizes the dialogic. This begins early in the film with the proclamations of innocence by an obese student named Boulanger (ironically, named the "baker") who faints during Father Jean's sermon about consuming the blood of Christ. His literal bodily excess is the symbolic opposite of the starvation and duress encountered by Jews, and his naïve questions and over-the-top antics render him grotesque and stupid in the face of real questions of bodily endangerment. In an ironic juxtaposition of excess, the pigs that fight for scraps are tended by Joseph, who becomes Judas figure, betraying Jean and the other Jewish schoolboys to the Gestapo at the end of the film. The pigs are a symbol of police authority as well as the food which Jean cannot eat because he is Jewish. But Joseph, who has power over these symbolically "low" animals, historically representing dirt and disorderly carnival culture (see Stallybrass & White), is a victim also. He learns about the realities of the war through the failed economics of trading food with the "enemy" – the boys of wealthy families who do not see the value of the goods they trade for stamps and cigarettes. Jean resists the food trading economy and the food itself, denying Julien's offer of pâté made of pork.

Yet Jean's desire for inclusion is also demonstrated through his silent attendance at the communion in the chapel, where he approaches Father Jean, kneeling to accept the host. Father Jean skips over him, denying him the act of consumption and inclusion at the moment he wants it most. Julien sees what happens, and Jean fails to achieve solidarity with the boys in this critical moment. It is notable that Father Jean, whose dis-appearing body is under his somatic control in the film (he chooses to place himself in danger by hiding the Jewish children), fails to share the body of Christ with Jean. Jean's dys-appearing body is again called-out, made visible in this moment of exclusion. Father Jean denies Jean at the only moment in the film where he wishes to consume something. The result of Father Jean's interference in a moment where bodily unions (the symbolic body of Christ, the Jewish body, the French Catholic body) might enable Jean to dis-appear, if only for a moment during the service, is that Father Jean fails to establish a dialogic relationship with his pupil. He cannot bring himself to contradict his religious practices to become one with Jean, to enter the dangerous but hopeful liminal space between his own safe body and Jean's endangered one – indeed where he might understand bodily dys-appearance on a visceral level. He fails to be the teacher who truly knows what Jean is feeling and experiencing as an outsider. Father Jean is limited as a teacher, preserving Jean from persecution only on account of his solidarity with the resistance movement and desire to save a life, but not because he desires a true dialogic relationship with him. At the end of the film, we see the final act of consumption – of Jewish bodies – as the three children are hauled away by the Gestapo to their death in Auschwitz. Again, Boulanger, the overweight child and ultimate consumer, declares "what are they doing? We haven't done anything!" which signals both the naiveté of the children and the failure

of relationships in the film to evolve to the level of mutuality between people. For the first time in the movie, Julien remains silent. He is not confused as he had been in the past. He experiences reciprocity with Jean as he waves to him when Jean turns around for a moment before being taken away.

The final form of the dialogic relationship that Buber describes is friendship, which evolves from the two-sided learning experience. Buber explains, “we call friendship the third form of the dialogical relation, which is based on a concrete and mutual experience of inclusion. It is the true inclusion of another by human souls” (p. 119). During the last scenes of the film, when pursued by the Gestapo and during the shutting down of the school, Julien finally achieves this level of dialogic relationship – friendship with Jean. It occurs through a profound loss of innocence by Julien. Even when the Gestapo asks the boys to pack up their belongings, Julien has not achieved this level, giving his book of the *Arabian Nights* to Jean naively. However, once Julien steps into the courtyard and is confronted by Joseph who tells him that he sold-out Father Jean and exposed him for hiding Jewish students in the school, Julien recognizes what is happening, and comprehends his own care and fears for his friend. He has learned the truth from both sides, and backs away from Joseph in horror – recognizing him as not merely an outsider on account of class and bodily difference, but as one who transcends classes without guilt in horrific fashion. Joseph, the outcast and cripple – the one character never included in the relationships of the school – tells Julien to “stop acting so pious,” reducing Julien’s actions to the teachings of the church. Instead, Julien runs back into the building to find his friend, for the first time feeling the same desperation felt by Jean, and experiences true solidarity with him. Julien’s Catholic body is called out as symbolically righteous. Yet his loss of innocence renders him far from naïve – enabling him to finally fully recognize Jean’s bodily endangerment. It is only in this moment of crisis and recognition of Jean’s inevitable death that the third dialogic level of genuine friendship emerges. The final lesson taught to Julien by his friend is though this act of consumption, where Jean is silently taken away to die, and waves good-bye without saying a word.

Conclusion

Martin Buber’s three forms of dialogue allow us to learn through witnessing a film what the characters onscreen learn through experience. Only when Father Jean himself is about to be persecuted and sent to a work camp could he enter into the second form of the dialogic relation with Jean, by experiencing fully the feelings of imminent persecution, betrayal, and horror felt by his pupil. However, the conditions are set for him by the forces of war. Father Jean does not enter into this dialogic relation willingly. Yet, unfortunately, he experiences it as the result of his actions. The children at the end of the film remain naïve, saluting Father Jean in solidarity, innocence, and a failure of full understanding signalled by their words, “au revoir, mon père!” as he is taken away. Julien, remaining silent, having entered into a full dialogic relationship with Jean only moments before, is no longer innocent. He cannot resist what he knows about final solutions – for himself as witness, for Joseph who has transgressed the social order, for Father Jean who faces brutal punishment, and most profoundly, for his friend Jean who will surely die.

I now wish to return to the original question at the outset of this paper, asking “what does it mean to consume, if not enjoy, trauma?” What does it mean to walk away from the viewing experience a “witness to witnesses” of horror? If trauma occurs when action is of no avail, when transgressions will continue despite the will to stop them, those who witness (as Julien witnesses the horrors facing Jean, and Jean witnesses Jewish extermination) and those who watch his inability to take meaningful action is frustrating and angering. Trauma is about being trapped. It is about confronting the difficulty of not just the events at hand (in this case the Holocaust) but the tension that lies between the event and the experience of remembering it. In other words, films like *Au Revoir Les Enfants* are educational foremost because they bring forth the necessary dialectic tension between a desire to deny horrible events and the will to proclaim them loudly. I would content that films such as this provide a complicated conduit for viewers into the space of witnessing. This is to say, audience members on the one hand, view a film for its entertainment potential, while being inserted into the dialectic of trauma. This is achieved by being forced into a state of witnessing the witness. Walking into the movie theatre, we might not have expected to view the sad trajectory of Jean’s experience through Julien’s eyes. Nevertheless we have been made unwilling

and unwittingly witnesses to Julien's trauma: his incapacity to change what will happen to Jean at Auschwitz. Yet by understanding the status of the body in site of education, we are able to go beyond what is said in the filmic narrative, and by reading the bodily transgressions further, through the dialogic, we can begin to understand the silences in spaces of education – that which cannot be said, especially by those silenced by the horrors of history. As viewers of trauma, we are asked to read more deeply, underneath the verbal utterances, and beyond the grand narrative of history. However, I assert that we must locate the spaces in which the body is portrayed as as transgressive, and find, and make memorable, the moments signposted by bodily status in which dialogue did not take place as a kind of education which not taught explicitly. The film makes it necessary to uncover trauma in the movie-watching experience of suspended reality. Safely in the dark in the movie theatre, we must be cognizant of more than our own silence. Rather, the silences involved in bearing witness to Jean's fate, and in the viewing -- witnessing Julien as another kind of witness onscreen -- make a clear statement about the place of the corporeal in education, and the necessity to articulate the place of the individual body – that is, each child and his or her story. Bearing witness thus becomes an experience out of which we can mourn for bodily loss by violent ends, as often the body is the message, and stands in for that which cannot be safely be declared aloud.

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Creating and sustaining an interactive and result oriented language classroom: an implication for language teachers at the basic level

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Abstract

This paper sees basic education as the foundation upon which all other forms of education are built; and it recognizes language as the veritable tool for imparting knowledge at any level of education. Creating and sustaining an interactive and result oriented language classroom at the basic level is thus the bedrock of any successful language education and language in education. The paper maintains that virile language development depends solely on how the foundation is laid at the early stages; this subsequently has effect on pupils' academic achievement in all their subjects across the curriculum at the latter stages. It looks into various factors that militate against effective teaching and learning of language(s) at the basic level. It therefore, examines such variables as the teacher, the environment, methodology and teaching facilities / materials that could contribute to the creation and sustenance of an interactive and result oriented language classroom at the basic level in Nigeria and other countries of the world.

Keywords: Interactive; result-oriented; language classroom; basic level

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1. Introduction

The basic level of education which a child undergoes before he/she moves on the next level is the primary education. It is upon this that every other form of education is built whether formal, informal or non-formal. The success attained at this level will determine the level of academic achievement of the child at the higher level. In Nigeria for instance, the basic objectives of primary education as cited by Jummai (2002) include the universalization of access, quality in the delivery, inculcating in the school children permanent literacy, numeracy and the ability to co

municate effectively. For these objectives to be actualized, therefore, the Federal Government of Nigeria recommends 9 years duration for basic education which comprises 6 years of primary education and 3 years of junior secondary school. To make primary education functional, resourceful and effective, therefore, the Federal Government in the National Policy of Education (1977, 1981 Revised 2004) sets the goals of primary education as follows;

- i. To inculcate permanent literacy and numeracy and ability to communicate effectively;
- ii. Lay a sound basis for scientific and reflective thinking;
- iii. Give citizenship education as basis for effective participation contribution to the life of the society;
- iv. Mould the characters and develop sound attitude and moral in the child;
- v. Develop in the child opportunities for developing manipulative skills that will enable him function effectively in the society within the limit of capacity; and

- vi. Provide the child with basic tools for further educational advancement including preparation for trades and crafts of the locality.

It should be noted that these aims could only be achieved first through the language of instruction and communication at this stage (i.e. lower primary), which is the case of Nigeria and the target language at the latter stage (i.e. upper primary upward). According to Eugholm (1965) and Bamgbose (1990) in Adegbite (2003), language is the key heart of the people and consequently the means of unlocking their knowledge and treasures. Language is the primary tool for acquiring knowledge and also a means of extending knowledge (Olaoye, 1998). The quality of the nation's education could be considerably determined by the quality of the language through which it is imparted. Language, apart from being a marker of identity, also marks individuality and national sovereignty.

In recognition of the pivotal roles of language in education, the Federal Government of Nigeria makes provision for language in the National Policy Education (2004). For the primary level, the policy states that:

- A. The medium of instruction in the primary school shall be the language of the environment for the first three years. During this period, English shall be taught as a subject (NPE. Para 19 (f) section 4).
- B. From the fourth year, English shall progressively be used as a medium of instruction and the language of immediate environment and French shall be taught as subjects (NPE. Para 19 (g) Section 4).

Policy statements on language education in Nigeria is a major concern to all stakeholders in Nigerian Educational system. In a multilingual society as Nigeria, the issue of language and education has generated a lot of controversies. The language policy for primary education recognises the crucial roles of both the mother tongue and English and that the mother tongue is appropriate for the overall development of the child at this level. It thus, requires English to assist the mother tongue at a later stage, when it is believed the resources of the mother tongue may not be sophisticated enough for the expression of the concepts and for teaching other subjects (Akindele and Adegbite, 2005). Having considered language as a medium of instruction, the role of language as a subject could also be considered. In this regard, three Nigerian languages are accorded official recognition. These are: (i) the mother tongue L_1 , (ii) English, which is the second language L_2 , and (iii) an indigenous language or a local second language LL_2 . The questions now are:

1. What are the factors militating against effective teaching and learning of these languages i.e. L_1 , L_2 and LL_2 ?
2. How do we create and sustain an interactive and result oriented language classroom at the basic level in Nigeria and the whole world.

Some of the factors militating against effective teaching and learning of language at the basic level include the following:

Inadequate qualified teachers, lack of instructional materials and facilities, wrong approaches employed by language teachers, non-implementation of language policy, poor attitude of learners, deprived home background, etc.

1.1 Creating and Sustaining an Interactive and Result Oriented Language Classroom at the Basic Level

Considering the understandable importance of language at all levels of educational system, it is important to ensure returns, which are commensurate with the vast amount time and resources spent on the teaching of it. It is generally claimed that the problems with language teaching and learning, particularly, the target language, lie with the foundations at the basic level, and a great deal of energy has been expended in recent years on various seminars and re-training programmes in various basic educational institutions to remedy the problems. It will surely take the efforts of the TEACHER to bring about the desired state of affair that will create and sustain a result oriented language teaching and learning. As the teacher is in total control of what to teach, how to teach it and the environment to teach, the following qualities are expected of a result oriented teacher;

- The teacher must be worthy model of the language he/she teaches.
- He/she must have an in-depth knowledge of the content and the method to employ in order to attain his/her instructional objectives goals.
- The teacher must be able to organise his/her lesson well and present his/her materials clearly and

logically.

- The teacher must be willing to answer pupils' questions and solve their learning problems.
- He/she teaches and evaluates effectively the four language skills.
- He/she is flexible, innovative and creative.
- He/she praises, rewards and encourages pupils and not being too critical of pupils.

In sum, the teacher's awe-inspiring qualities are patience, perseverance, dedication, hardwork, competence, efficiency, creativity and effective management of the class. In the same vein, perseverance, interest, cooperation and patience are expected on the part of the learners. The learner's interest and attitude towards the language is a sure way of achieving grammatical and communicative competence with minimum effort. Wilkins (1978) quoted by Fodeh Baldeh (1990) opines that the appropriate time for second/foreign language learning is between the ages of four (4) and ten (10). He is convinced that the young child's brain is infinitely adapted for foreign language learning. Therefore, he is of the view that the following factors are plausible reasons for the early introduction of a second/foreign language at the basic level:

- i. Enormous ease in imitation
- ii. Absence of restraint and self-consciousness
- iii. Minimum interference from the previous language experience and social phenomenon.
- iv. Profound flexibility of the speech organs.

Thus, teachers of languages and their pupils have important roles to play in creating and sustaining an interactive and result oriented language class.

1.2. Methodology

The only way to quantify whether or not one's teaching has been successful is to determine whether or not the learners have actually learned what one wants them to learn or produced a satisfactory result of a clear cut set of objectives. The means or strategy employed by a teacher in an attempt to impart knowledge to the learner is referred to as methodology (Asoga Allen 2002). The achievement of the teaching objectives owes much to the employment of the appropriate teaching method.

In a general language course, it is a pedagogically sound principle that the pupils are equipped with the language skills to cope with everyday activities and situations, which play a central part in their lives (Fodeh, 1990). This necessarily means that the content of the syllabus must be relevant to the interests and language needs of the pupils at the time of learning.

The teaching of these languages should follow a sequential bilingual approach in which:

- i. The L1 is introduced to pupils earlier than L2s and
- ii. Some skills in both the L1 and L2 are taught earlier to facilitate the later acquisition of L2 literacy skills (Adegbite 1993 in Adegbite 2005).

The table suggests the languages should be introduced thus;

Table 1. Teaching language skills at the lower primary level

SKILLS	LANGUAGES	CLASSES			
		P1	P2	P3	P4
Listening	L1	√			
	L2	√			
	LL2	√			
Speaking	L1	√			
	L2	√			
	LL2				
Reading	L1	√			
	L2		√		
	LL2			√	

Writing	L1	√	
	L2		√
	LL2		√

Adapted from Akindele & Adegbite (2005).

The table is interpreted thus:

- a. That four basic skills of L1 should be introduced in primary 1
- b. L2 listening in early primary 1, L2 speaking in the late primary 1, L2 reading in primary 2, L2 writing in primary 3;
- c. LL2 listening and speaking in later primary 1, LL2 reading in primary 3 and LL2 writing in primary 4.

It is however, assumed that a second language has a higher status than local indigenous languages, hence more periods ought to be allocated to the teaching of it in the time table. The communicative method of teaching is therefore advocated for the teaching of any of these languages i.e. L₁, L₂ & LL₂

2. The Communicative Method

Communicative language teaching makes use of real life situations that make pupils interact with one another. The method rose to prominence in the 1970s and early 1880s because of an increased demand for language learning, particularly in Europe. The advent of the European common market led to the widespread European migration, and as a result, there was a large population of people who needed to learn a foreign language for work or for personal reasons (Wikipedia). This increased demand put pressure on educators to change their methods of teaching. In traditional method, it was assumed that students were aiming for mastery of the target language and that it was the will of students to study for years before using the language in real life. It was, however, discovered that these assumptions were challenged by adult learners due to work constraints and by school children who were not academically able to cope with drills and memorization of language structures for mastering the target language. In order to motivate these students, an approach with a more immediate result in language proficiency was developed – Communicative Teaching Method.

Communicative method could be said to be a product of educators and scholars who were dissatisfied with the audio-lingual and grammar-translation methods of teaching foreign languages based on the fact that students were not learning in a real life situation and did not know how to communicate in appropriate social setting using appropriate gestures or expressions.

Though scholars have recommended that language teachers should be eclectic in their methods of teaching, it should, however, be noted that language learned in real life makes the learning effective and resourceful. Thus, communicative method is advocated in the teaching of four language skills at the primary level in order to make the class interactive and result oriented.

In communicative teaching method, the teacher sets up a situation that pupils are likely to encounter in real life and pupil's motivation to learn comes from their desire to communicate in meaningful ways about meaningful topics. In communicative methods, the central focus is dialogue. It is interpersonal activity which has a clear relationship with society. Language teaching strategies must incorporate communicative competence so as to enable the learner to feel at home with the language in whatever situation he/she may find him/herself. In this method Baldeh (1990) suggests that it is absolutely necessary to expose students/pupils to a large quantity and variety of contextualized material.

Teachers in communicative classrooms will find themselves talking less and listening more, becoming active facilitators of their students' learning (Larsen-Freeman, 1986 quoted by Galloway). For instance, when the teacher sets up an exercise, he/she must step back and observe, acting as referee or monitor because the students' performance is the goal. The scene of a communicative language classroom is active, the pupils do most of the speaking and because of this, they may find themselves gain confidence using the language. Using the English language as an example, some of the classroom activities on communicative method include:

2.1 Listening Activities:

The teacher may instruct the pupils to listen to description of the location of items, persons or scenery and sketch the illustration of what they heard.

- The teacher may divide the class into groups of three or four. One pupil relates a recent experience for any of his classmates to retell without leaving out relevant information. Others in the class assess his/her accuracy. Pupils change roles while the teacher moves from group to group as an observer and facilitator.
- Pupils may be given an instruction to listen to a conversation in a public place and be prepared to answer in the target language, some general questions about what was said, such as;
 - Who was talking?
 - To whom?
 - Where were they?
 - What were they talking about?
 - What did they say?
 - Did they know you were listening to them?
 - If they knew, what were your contributions? etc.

For the pupils to be able to give adequate information about what they have heard, they must have listened with rapt attention. An exercise like this will put them in a real world listening situation.

- The teacher may read a passage aloud and ask the pupils to give the passage a title and state the main ideas.
- The pupils may be engaged in further discussion on the topic especially regarding ideas that could be added to the text or evidence on the attitude of the writer to the topic e.g. Is he/she approving or disapproving or uncommitted to what he/she wrote.

2.2 Speaking Activities

There seems to be no limit to classroom situation in which students can be made to speak. The best way to introduce different ways of speaking in communicative method is through DIALOGUE.

(i). Pronunciation Exercises

Such exercises are usually imitation exercises. The teachers leads in the identification of objects around them and guides them in pronouncing the words correctly. This implies that the teacher's or a model's voice should always provide samples for pupils to follow. For instance, sound discrimination can be taught through the use of minimal pairs e.g.

Van	tin	bet	farm	gate
Fan	pin	pet	firm	cake

(ii) Intonational Patterns

Intonation is the rise and fall in the pitch of voice when speaking. Falling tune is used on:

- Statements e.g. I have given her the book ↘
- Commands e.g. Keep the book on the table. ↘
- Wh Questions e.g. Who gave you the book? ↘
- Exclamations e.g. What a good result! ↘

The pupils demonstrate these activities in the class while the teacher guides

Rising tune is used on:

- Yes or No questions e.g. Will you travel tomorrow? ↗
- A list of items in which only the last item carried the falling tune e.g. I need a pencil, a ruler, an eraser ↘

and a sheet of paper.

b. Structural Exercises

These provide an opportunity for pupils to acquire the structure of the language for the purpose of effective use. By doing these exercises, they will develop fluency in English and the structures of the language will actually become part of them. These exercises should also be contextualized.

Types of Structural Exercises

- i. Oral substitution: This can be used to teach word classes e.g. nouns, verbs, pronouns, adjectives, adverbs, etc. orally.

James and Paul	Are	neater	Than	they are
They		older		you are
James	is	happier		she is
He				we are

- ii. Oral transformation: Here sentences are changed from positive to negative, interrogative, active or passive form depending on the point of interest e.g.
 - John cleaned the board. (positive, active)
 - John did not clean the board. (negative)
 - Did John clean the board? (Yes or No interrogative)
 - John cleaned the board, didn't he? (Tag question)
 - The board was cleaned by John. (passive)

c. News Sharing

Guiding or leading pupils to talk about their experiences, events, objects within and outside the classroom is another way of developing their speaking skills. Oyetunde and Muodumogu (1999) suggest the following activities:

- Tell them simple stories and ask them to retell the stories.
- Reading aloud to them and inviting their reactions to the stories read.
- Teacher discussing a topic or an event with the pupils and requiring each of them or some of them to comment on, add to or ask questions about what has been said.
- Oral composition on topics such as my mother, my school, my best friend, etc. – this provides opportunities for self-expression.
- Dramatisation and role play – pupils may be asked to act out a short story in the class.

2.3 Reading Activities

Reading is a complex skill which involves a whole series of lesser skills. Allen Widdowson (1974) identify the three major skills of reading as:

- The recognition level (beginning)
- The structure level (intermediate)
- The interpretation level (advanced)

Reading is a very important skill in the academic curriculum both as a subject and as a major source of learning other subjects in the curriculum. Although reading is acknowledged to be one of the vital language skills that a child needs, it appears that relatively little is done to foster the development of the skill in primary school. The problem arises partly because teachers and pupils are not ready for the programme, there is lack of support, interest and materials to measure reading activities in the classroom.

Therefore, an attempt will be made to discuss how the reading skill can be taught at the basic level of education. The following can be used to teach reading at this level.

Letter Identification

This involves identification of the upper case letters – A B C D E F... and the lower case letters – a b c d e f... The aim is not to merely memorise the alphabets but also to be able to associate the letters with sounds in words.

Word Identification

This is another method of elementary reading which is otherwise known as word reading. The teacher is expected to expose the pupils at this initial stage to two/three letter words of the objects around them or words that denote their experiences.

Examples include:

cup	cat	car
boy	buy	bad
day	den	dry

The pupils are expected to identify the words in isolation and then use them in certain contexts. They also should be able to read the words correctly and clearly.

Sentence Reading

This could be regarded as an advanced stage of reading skills. Sentences are often very short. Examples are common in picture reading, reading simple sentences based on questions and statements/answers; reading based on asking questions for identification and classification of objects within the classroom and their school environment, reading from flash cards and reading nursery rhymes on things they can see around them, illustrating the correct pronunciation.

What is this?

It is a ball.

It is a pencil etc.

2.4 Writing Activities

At the lower primary, the teaching of writing involves assisting learners to develop the ability to shape letters of the alphabets, knowing the right combination of the letters to form correct spellings and developing the skills of self-expression – (composition). The teaching of writing at the lower primary school level involves training the pupils on the following:

Graphics

This involves the training of pupils to shape the letters of the alphabets. It demands that the teacher trains pupils in the art of making straight lines, curves, circles, squares etc. The teacher should emphasize the correct method of writing the alphabets. For instance, he/she should insist on correct method of writing letter /o/ which is clockwise and not anticlockwise. Pupils should be made to understand the distinction between small and capital letters.

Spelling

This involves associating some letters with certain sounds or words. The teacher can begin to train the pupils in the art of writing correct spellings by the use of common objects e.g. ball, pot, bag, toy, etc.

b	-	ball, bag
p	-	pot
t	-	toy

Completion

This involves the omission of one or two letters and asking the pupils to complete the words with the correct letters to form the correct spelling e.g.

b _ y	-	boy
b _ ok	-	book
b _ ll	-	ball
ch _ ir	-	chair etc.

Composition

This may take different forms, but generally it refers to the ability to express oneself through written words. At the lower primary school level, it could take the form of direct copying from examples giving on the chalk board and filling in the gaps.

Writing Activities at the Upper Basic Level

A number of strategies exist for writing at the upper basic level, they include the following:

- **Fill in the blanks/frame:** The teacher can write out the essay he wants pupils to write on the chalkboard with blanks or gaps in some of the sentences which the pupils would be required to complete by writing out the whole essay correctly.
- **Imitating a model:** The teacher can ask the pupils to imitate the organization format and style of a simple narrative, descriptive or expository essay to write their own attempts.
- **Guided Writing:** This involves giving them guidelines which can be in form of questions e.g.
What is the name of your school?
When was it founded?
How many teachers do you have in your school? etc.

3. Instructional Materials/Facilities for Language Teaching

Information and communication technology information (ICT) has become an important part of most organizations and institutions these days. As part of the efforts in making language classroom friendly to pupils and teachers and result oriented, there is need for the integration of ICT in the language classroom to assist, enhance and extend students' knowledge. Enhancing basic information and communication skills such as reading, writing and speaking should be the focus of using ICT in language education, not simply ICT literacy (Omwenga, 2011).

ICT multimedia resources such as projectors, videos and audio-video software, DVD players, television sets, tape recorders, etc. could motivate people to learn, reduce boredom, save time, make teaching learning effective and resourceful. The implication is that there must be language laboratories in primary schools that could house collection of these multimedia resources to be accessible to people for independent language study. The learning

environment must be conducive, well ventilated, neat and adequately furnished. For effective teaching and learning, the class should not be overcrowded. Thus, NPE (2004) states that the teacher/pupil ratio should be 1:35.

4. Recommendations

In creating and sustaining an interactive and result oriented language classroom at the basic levels in countries of the world, all stakeholders in education industry are to take adequate measures to improve language classroom situation in order to improve academic performance of pupils in all subjects across the curriculum as language is the medium through which knowledge is imparted. To improve classroom situation, therefore, the following recommendations are hereby made;

- Qualified language teachers should be employed to teach at the basic level being the foundation upon which all other forms of education are built.
- Teacher of language should update their knowledge and skills in various language specializations to meet the challenges and innovations in methodologies and content of the language through conferences, seminars, workshops, and other developmental professional / academic programmes
- Language education school/college should be established to produce a required number of language teachers in countries and steps should be taken to ensure adequate teacher monitoring and quality control on job.
- The school environment should be made conducive for teaching and learning by providing a well motivated work force with necessary equipment and facilities put in place.
- Language policies as entrenched in Nations' Educational Policy should be properly implemented by language educators.
- The issue of large class size must be addressed to pave way for effective teaching and learning, give individual learners opportunity to fully develop their potentials and adequate classroom management.

5. Conclusion

This paper has so far discussed some variables that could help create and sustain an interactive and result oriented language classroom at the basic level in any country of the world. Some factors that could inhibit effective teaching and learning are identified. To this end, recommendations are made; it is therefore believed that if appropriate methods are employed, adequate facilities and materials are provided, government policies on language are implemented, qualified language teachers are employed, language teaching and learning will be pleasurable and resourceful at the basic level of education in all countries of the world.

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world. Design affects our context at different levels. From micro to macro, we can define a local, regional, national and global context. Within this same logic, design disciplines are closely interrelated but operate at different levels of complexity and scale. In the smaller scale, we classify design disciplines as product design, industrial design and fashion design. On a larger scale we classify interior design and architecture, and on an even larger scale community design and urban planning (Montana-Hoyos & Lemaitre, 2011).

In this context, nature has become a “popular” research topic in all design-related disciplines in means of finding sustainable solutions to problems. Since design is a bridge between nature and man, it is affected by every phase of nature. Reed stressed that we need major changes in our mental models in order to contribute to improving our planet. Reed also indicated that science is rapidly changing in means of understanding nature and hence, by understanding the way the universe works, new sciences can better be reflected in designs; that it is necessary to think in a way similar to living systems; and that in order to fully participate in life systems, the notion of holistic systems and the design process should be integrated (Reed, 2007a, 2007b). Biological organisms, phenomena, and strategies provide insight into sustainable and adaptable design. Because, nature has its own laws and principles to sustain the eco-system. As Benyus asserts, after 3.8 billion years of evolution, natural systems have adapted to be resourceful, innovative and sustainable by identifying what works, what is suitable and what sustains for a survival of an ecosystem. According to Benyus, ten principles can be identified as underlying nature’s rules for sustaining ecosystems: Use waste as a resource, diversify and cooperate to fully use the habitat, gather and use energy efficiently, optimize rather than maximize, use material sparingly, don’t foul nests, don’t draw down resources, remain in balance with the biosphere, run on information, shop locally (Benyus, 1997). These winning strategies have been adopted by all organisms; hence they have been employed by both animals and plants having diverse organs and parts that harmoniously function together as a whole to sustain life and its activities (Thompson, 1999).

If our products, interior spaces, buildings and cities have designed in accordance with these principles, as Benyus suggests, we would be well on the way to living within the ecological limits of nature, and thus achieving our goal of sustainability. According to Galha Bártolo and Bártolo, design by nature can be achieved by bringing together the science of design with the creativity of nature. The strategies of living systems can provide a conceptual framework for the link between natural and human design, as humans and environment must evolve together towards a design symbiosis. In this context, nature/bio-inspired design strategies/approaches such as biomimicry, biomimetic, bionic and biognosis also industrial ecology, construction ecology, regenerative design, biophilic design, eco-mimicry focus on learning from nature for sustainability and creativity (Galha Bártolo & Bártolo, 2002). However, as Gamage and Dayarathne state, these strategies take different pathways to achieve this goal they have the same concerns but different priorities, weightings, and principles (Gamage & Dayarathne, 2012). According to Montana-Hoyos, biomimicry distincts from other nature-inspired design approaches in respect to understand the nature as model, measure and mentor. Biomimicry proposes the study of nature from a systems point of view, in which all elements are interdependent. By understanding nature as measure, it respects the limits of nature and thus respects the principles of sustaining life in our planet (Montana-Hoyos, 2009). Biomimicry as a design approach typically falls into two main categories: direct and indirect approaches. In the direct approach, a design directly mimics strategies of an organism, a behavioural pattern or a system in nature with aid of an analogical translation system, whereas in the indirect approach, the design uses abstract ideas and concepts as principles from those apparent in the domain of nature (Gamage & Hyde, 2012). Carl Hastrich suggested that a design process (design spiral) employing bio-mimicry includes six steps: identify, translate, observe, abstract, apply, and evaluate (Carl Hastrich, 2012).

2. Nature awareness in design education

Today, a paradigm change is needed for reaching an accurate understanding of sustainability and for finding solutions to problems. Design education is a milestone in this change. The education of all students who study design disciplines is of paramount importance since they are the people who will perform future applications and who will establish the theoretical structure. In order to achieve this, a radical transition from the education approach which accelerates environmental deterioration and which cannot manage limited energy and resource

use into a sustainable education approach which is in mutual relationships with nature's regenerative systems and which results in accurate resource transformation (M. Yeler, 2012). In order to educate designers for ecologically and socially responsible practice, design schools are need to be radically redesigned in their structure, content, and methods (DeKay, 1996).

A student can gain awareness of nature and transform formations in nature and biological expressions into design knowledge if education programs are revised in a way that enables the student to comprehend how these events occur in nature. It is assumed that in design courses, which constitute a gradual process, learning knowledge of nature by exploration, analyzing this knowledge, making accurate determinations, and transforming knowledge of nature into design knowledge by making connections will increase the creativity of design students. In this context, including nature-inspired design approaches in education programs of all design disciplines is prioritized in means of creating a sustainable world.

Consideration of the overall, although design teaching has occasionally looked at nature for inspiration, systematic approaches to teaching design fundamentals through nature have been rare. Some schools around the world identified teaching methods and their obstacles while exploring the potentials of employing biomimicry in design. Labs, exhibitions and workshops have also been conducted to teach and research how to emulate nature for design. Manufacturers are actively testing bio-inspired products, ideas are being discussed at international conferences. Also, educating for biomimicry however has begun only recently although numerous programs exist. For example, the Biomimicry Guild have forged a partnership to integrate organic solutions inspired by nature into sustainable design and building practices. Ask Nature' offers online data for biological strategies and ideas to inspire biomimetic design. Biomimicry Institute offers many educational programmes, workshops and courses for professionals related to all fields of design and engineering. The Biomimicry Portal, a prototype data-base was originally created in collaboration with the Rocky Mountain Institute, and is a precursor to Ask Nature. HOK, one of the largest architecture firms in the world, recently formed an alliance with the Biomimicry Guild to begin applying biomimetic concepts to the design and development of building projects around the globe (Biomimicry Institute Website, 2014; Gamage & Dayarathne, 2012; Goss, 2009).

In an medium where awareness and efforts regarding learning from nature in design education has increased throughout the world, this study aims to measure students' level of nature awareness and to understand how they benefit from nature in design education among students who studied interior design, associate's degree (2 year program) at Kırklareli University, Vocational School of Technical Sciences during December, 2013 in Turkey.

3. Materials and methods

This study is a questionnaire study which relies on the pretest-posttest model and recruited a total of 108 first and second year students who studied in the department of interior design. The pretest-posttest model, which was chosen for collecting data on students' level of awareness, was applied before and after the seminar on "Nature and Design". In order to avoid biasing the students, prior to administration of the pretest, the students were asked to answer questions without receiving any additional explanations other than the topic of the seminar.

The seminar on "Nature and Design" was prepared as a power point presentation and took 45 minutes. The seminar was provided separately for first and second year students. In order to determine how well the students can integrate nature and related concepts in design education, the seminar was prepared to be very comprehensive. During the seminar, concepts such as nature, ecosystem, and sustainability were explained first, the relationship between nature and design was addressed, and nature-inspired design approaches were presented. In the seminar, the topic of how negative environmental problems can be minimized via a design approach and design processes that take nature as its basis was emphasized. The characteristics of nature and organisms and how these characteristics are presented in design were explained in terms of biomimicry and nature/bio-inspired design concepts using visual material. In this way, in the seminar, it was aimed to help the comprehension of how laws of nature and design can be integrated for a sustainable life. It was aimed to analyze students' level of increase in nature awareness and to determine to what extent these topics should be included in design education via the posttest that was applied after the seminar. At the end of the seminar, students' questions were answered and a discussion was carried out.

In the questionnaire, the students were first required to indicate their year of study. The year of study was prioritized in assessment because it was thought to determine students' approach to the topic and their awareness.

Table 1: Years of study of students

Years of study	N	%
First year students	47	47
Second year students	53	53
Total	100	100

It was assumed that gender was not determinant of the topic and therefore was not taken into account in assessments. The first 4 questions of the pretest and posttest aimed to investigate students' opinions and to measure their level of awareness regarding nature, design, and education. In both tests, the students were required to respond to the questions as "yes", "partially", and "no". The remaining 3 questions in both tests were open-ended questions that aimed to investigate students' opinions, knowledge, and requests.

Out of 108 questionnaires, 8 were excluded from evaluation due to missing posttest responses and 100 questionnaires were evaluated. In analyzing data obtained from questionnaires, percentage distribution, which is a simple statistical method, was used.

4. Findings

Students' responses to the pretest and their interpretation are provided below.

Table 2. Questions measuring the nature awareness of students before the seminar

Questions	First year students						Second year students					
	Yes		Partially		No		Yes		Partially		No	
	N	%	N	%	N	%	N	%	N	%	N	%
Q1: Does your lessons contain principles of nature and concepts (ecology, sustainability, etc.) related to nature?	30	30	0	0	17	17	26	26	4	4	23	23
Q2: Can be nature use as a source of information in the design?	46	46	1	1	0	0	52	52	1	1	0	0
Q3: Can a design based on the nature, reduce the negative environmental impacts in the world?	39	39	3	3	5	5	36	36	14	14	3	3
Q4: Have you heard about the terms biomimicry or bio-inspired design before?	4	4	0	0	43	43	5	5	0	0	48	48

Among 100 first and second year students, 56% reported that the concepts of ecology and sustainability were included in the courses, whereas 40% reported that these concepts were not included. The high number of "no" responses indicate that these concepts were included in courses in a shallow way and that these concepts were explained without relating them to the principles of nature. Therefore, it is understood that students could not internalize these concepts at a sufficient level. Nevertheless, 98% of the students stated that nature can be used as a source of knowledge in design. Students reported that they carried out pattern work particularly in design courses. Latter interviews conducted with students revealed that in pattern work, the students worked on topics of shapes, textures, and colors in nature within the framework of an approach that focus on appearance. Regarding the responses to the topic of reducing environmental problems via a design approach based on nature, 75% of the students said "yes", 17% said "partially", and 8% said "no". Therefore, it was presumed that the students have positive thoughts on being able to find solutions for design problems. 91% of the students reported that they never heard of the concepts of biomimicry and bio-inspired design, whereas 9% stressed that they heard of the concept of biological inspired design more than the concept of biomimicry.

Table 3. The sources from which the student heard about nature-inspired designs

Q5: If yes, which sources have you heard from about the terms biomimicry and bio-inspired design before?

First year students	Book, journal, internet, television, friends
Second year students	Book, journal, internet, television

4 first year and 5 second year students (9% total) who reported to have heard of the concept of biomimicry and bio-inspired design stated that they heard these concepts mostly from resources in the following order: books, journal, internet, television, and friends. Students' responses show that these concepts were not introduced in courses.

Table 4. The statements of students on the meanings of nature inspired design concepts

Q6: Would you explain what biomimicry or bio-inspired design means to you?

First year students	Designs inspired from biology Designs including issues of biology Designs demonstrating the compliance of living things in nature
Second year students	Designs about living things and nature Designs utilized from nature and living things Designs inspired from structure of living things Designs inspired from biology Biological, physical (human body) designs

3 first year and 10 second year students answered the question which was prepared for understanding how students make sense of the biomimicry and bio-inspired design concepts. When the responses were evaluated, it was observed that the students used very general statements and that they made brief definitions by connecting the concepts. Some students related the concepts to the human body.

Table 5. Examples given by students to nature-inspired designs

Q7: Would you give an example for biomimicry or bio-inspired design or an implementation?

First year students	Fridge from honeycomb
Second year students	Butterfly shaped furniture Private bathroom and kitchen supplies produced for disabled people

Only a total of 3 students (1 first year and 2 second year students) who heard of and defined these concepts could provide examples of designs produced with these concepts. Examples of fridge from honeycomb and butterfly shaped furniture indicate that the students perceive these concepts in a formal format. One student related his/her example to the human body.

Students' responses to the posttest and their interpretation are provided below.

Table 6. Questions measuring the nature awareness of students after the seminar

Questions	First year students						Second year students					
	Yes		Partially		No		Yes		Partially		No	
	N	%	N	%	N	%	N	%	N	%	N	%
Q1: Did the presentation help you understand nature related concepts and the principles of nature?	45	45	2	2	0	0	48	48	4	4	1	1
Q2: Do you think information learned from nature can produce solutions to the aforementioned problems?	40	40	5	5	2	2	39	39	12	12	2	2
Q3: Is training on biomimicry or bio-inspired design given in your	9	9	3	3	35	35	9	9	6	6	38	38

school?

Q4: Is there a need for information about nature in design and other courses? 46 46 0 0 1 1 50 50 2 2 1 1

Following the seminar which was provided before the pretest, which predominantly attempted to explain the principles of nature, and which related these principles to design, the rate of students who understood nature related concepts reached 93%. Students who used to be familiar with the concepts of nature, ecology, and sustainability in a shallow way gained significant awareness on the content of these concepts. Regarding the topic of producing solutions to structure caused environmental problems mentioned in the presentation by using knowledge obtained from nature, 79% of the students responded “yes”, 17% responded “partially”, and 4% responded “no”. When evaluated with the pretest, it was observed that nature awareness in means of producing solutions for environmental problems slightly increased. Among the students, 18% reported that education on biomimicry and bio-inspired design approaches was provided at school, 9% reported that it was partially provided, and 73% reported that it was not provided at all. In the pretest, 91% of the students reported that they never heard of these design concepts (particularly in courses), however; in the posttest 27% stated that such education was provided, leading to a contradiction. It was thought that the students answered this question as yes or partially because they approached the topic in means of nature and sustainability instead of concepts and they considered the pattern work they did during design courses. 96% of the students reported that nature and related knowledge and design approaches are necessary in design courses and other courses. Therefore, the information and numerous examples provided in the presentation are thought to affect these results.

Table 7. Semesters on which students want nature related subjects to be in the context of their education

Q5: On which semester of your training do you think a course that includes nature related subjects should be placed?	First year students		Second year students	
	N	%	N	%
I. Semester	33	33	41	41
II. Semester	8	8	6	6
III. Semester	4	4	5	5
IV. Semester	2	2	1	1
Total	47	47	53	53

74% of the students reported that it would be more beneficial for nature related topics to be included in the first semester of education. This finding indicates that the students had increased awareness on the fact that they can use the basic nature knowledge obtained during the first semester of their education in latter courses and design courses.

Table 8. The thoughts of the students on how nature related subjects could be integrated in their educational programs

Q6: How can design methods and the knowledge of nature be integrated to your training program?	First year students		Second year students	
	N	%	N	%
As a separate course	1	1	5	5
As a elective course	14	14	16	16
Integrating with design and the other courses	26	26	27	27
As a seminar	6	6	5	5
Total	47	47	53	53

Regarding the topic of including knowledge of nature and design methods in education programs, 53% of the students wanted these topics to be included by integrating them with design courses and other courses, 30% wanted these topics to be included as elective courses, 11% wanted these topics to be explained via seminars, and 6% wanted these topics to be included as a separate course. Considering the weight of design courses in education

programs, it is very important for students to transform knowledge of nature, which is acquired through different courses, into design knowledge using different methods. Therefore, the students' requests regarding the integration of nature knowledge with all courses indicate that their awareness levels will increase during their education. It will be possible to gain more detailed knowledge by including elective courses and seminars in education programs.

Table 9. The thoughts of students on the place and effect of nature in their design courses and future lives

Q7: What do you think about the effects of nature in design lessons and in your life in future?	First year students		Second year students	
	N	%	N	%
I will use it at my designs deliberately	30	30	37	37
There will be a very positive contribution	8	8	5	5
I have no idea	9	9	11	11
Total	47	47	53	53

After the presentation 67% of the students stated that they would use their knowledge of nature in their design courses and their future life. While 13% of the students stated that the presentation had generally positive contributions, 20% stated that they had no opinion on the subject. These results are important in that they show that awareness on how nature can be used in design has formed in the students.

5. Conclusion and suggestions

When the questionnaire was evaluated, it was found that first and second year interior design students who took the questionnaires gave similar answers with no significant difference between years of study. It was found that students evaluated nature and related concepts superficially before the presentation, didn't have much knowledge on the subject, and didn't use those strategies in their design courses. After the presentation, their awareness was seen to increase greatly through the information they received on how they should look at nature, how they can see the solutions of nature, and how they could use those in their designs. The fact that the students hadn't heard much about nature-inspired design approaches such as biomimicry show that although spreading widely throughout the world, these concepts have not been heard, used in designs, or included in educational programs sufficiently in Turkey yet.

While a swift change and transformation process is being experienced worldwide, interior design and other related disciplines should clearly be constantly updated with a reformative approach, starting with educational levels, in order to adapt to the ever changing conditions. However, the important point to stress here is that the predominantly observed trend in the applications of all the design disciplines in this change and transformation process is keeping nature at the forefront. It is clear that the laws of nature will be understood eventually through the observation of events and processes, and that these laws of nature, when applied to design disciplines with this approach, will have the capacity change the life of humanity for the better and make it easier. However, it is natural for design students who have just started training to struggle at grasping the concept of a living system. For this reason, as an introductory course, the use of nature's richly formed patterns as a source of reference for design research can be implemented. The students can be taught to grasp the principles and elements of design more extensively and build correlations by interpreting these patterns through the methods of observation, analysis, sketching, and modeling. Approaching nature from this perspective in the introductory stages of design may enable a more fluid grasp of design, create the awareness and desire to observe and research the beauty of nature in its various dimensions, and improve creativity. Additionally, this approach may help students synthesize the knowledge of nature better in their later courses, grasp living systems and formation processes better instead of just producing forms, and thus gain the awareness, sensitivity, and consciousness necessary to produce more sustainable designs.

In this context, starting with the assumption that using information internalized in training correctly in

professional life would create a correct sustainability approach, the structure, context, and methods of design training programs should be reevaluated in a multidimensional manner. Through the implementation of interdisciplinary studies in our educational system, it is thought that more solution oriented, creative, and novel design ideas may be produced from nature based knowledge. An educational approach that associates nature-inspired design approaches with human needs, social, economical, and environmental data in a holistic approach is very important to provide future designers with basic information on sustainability.

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Creative drama applications as complementary for constructivist approaches for science courses: teacher and student's evaluations

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Abstract

It is crucial that; application of new approaches, methods and techniques on the education of science and technology based on constructivism. It is also required that ; teachers must ensure the sufficient level about the subjects new approaches-methods and techniques such as creative drama. The goal of this case study, is to investigate the opinions of 30 individual 6. class students and 2 science teachers about the utilization and effectiveness of creative drama practices which is improved and applied by the researcher. Towards this goal, it was worked that; applying of design of the creative drama education program, about lesson, In the research; observation, meeting and document analysis which are qualitative data collection tools are used in the determination of the opinions of the students and teachers tending to this application process. After the data that are achieved from the researches, observations and student views; creative drama application provides that students knows themselves more and learning by experience and provides an easier and enjoyable education media and also provides social development and communication. It is expected that; contributing to the area with regard to an addition to methods based on constructivism ; but not contributing usage of creative drama in addition to conventional methods.

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Keywords: teaching science and technology, creative drama method, constructivist approach

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Peer-review under responsibility of the Sakarya University.

1. Introduction

Modern education approaches are essentially the approaches that teach students ways to acquire knowledge rather than memorizing it. This provides for the development of various learning models and teaching methods that enable the structurization and discovery of knowledge by the students themselves. Nowadays, the creative drama is being implemented as seen to be a student oriented method that makes the individual participate actively in the learning process, gives the opportunity to learn through actions and experience, to learn how to study, to realize themselves and to be a creative, productive individual; an approach that, shortly, contributes to the development of an individual's all aspects (Kaf, 2000).

"According to the modern education understanding, teachers are supposed to develop skills related to the subject field and field education, as well as the teaching-learning process. The level of development, self improvement and knowledge fund require the teachers to posses knowledge regarding modern, cultural and universal subjects, to be aware of the new methods and techniques. One of such methods is the creative drama method (Özdemir & Üstündağ, 2007, p. 227)."

Studies performed in the field show that the use of creative drama method in Science and Technology education gives the students an opportunity to bring forth their hidden energy, to discover themselves and to learn through actions and experience (Dakılıç & Gönen, 1998). Gürdal et al. (2001) indicated the advantages of the creative drama method in terms of Science and Technology education to be the provision of social development and communication in group work during drama workshops, creation of a more enjoyable and easy learning environment for the science and technology concept. Bentley & Watts (1989) described it as being able to increase verbal communication and gives the students an opportunity to share their experiences with the world.

The science and technology program aimed to ensure that students learn, understand and experience the excitement of the natural world, find interest in the science and technology, gain the skills to structure the new information, develop their knowledge, experience and infrastructure regarding the professions, use science and technology in problem solving, learn to study, use their scientific process skills, this case, the use of creative drama, which involves activities for active participation of students in the process and is able to invoke curiosity in students, is important in terms of achieving the goals of the science and technology program (Önder, 1999). Moreover, teachers, who assist the students in learning according to the applied program goals, need to become sufficient in terms of use of the creative drama method, which has an important place in achieving the goals of the program (Özdemir & Üstündağ, 2007). The vision of the Science and technology lesson program is to bring up all students, regardless of their individual differences, as literates of science and technology. A general definition of the science and technology literacy is the combination of science related skills, attitude, values, understanding and knowledge necessary for individuals to develop their research-questioning, critical thinking, problem solving and decision making skills, to make them life long learning individuals, to ensure that the sustain their sense of curiosity for the environment and the world. Bringing up the students as literates in science and technology or scientific literates, regardless of their individual differences, can be achieved by means of the creative drama method (Özdemir & Üstündağ, 2007). Güzel (2001) and Candaş (2008) applied the drama method in various subjects within the scope of the science and technology courses and indicated that student successfulness, course incentive increased, the classes became more interesting as a result of the applications, which helped the students to remember what they learned more easily, simplified the learning process, and concluded that the applied drama activities ensured extremely consistent learning.

1.1 Problem

The goal of this study conducted as a case identification study is to study the opinions of 30 6th-grade students and 2 science teachers, who participated in creative drama application developed and implemented by the researcher, regarding the use and effectiveness of such approaches. Answers to the following questions were sought in scope of this study.

What are the views of students and teachers regarding the use of creative drama applications during the 6th grade science courses?

What are the difficulties encountered by students and teachers in regard to the creative drama applications?

What are the students' suggestions regarding the creative drama applications?

What effects do contributions and suggestions of students for the structuring of the process have on the achievement of goals of the creative drama applications?

What effects do contributions and suggestions of teachers for the structuring of the process have on the achievement of goals of the creative drama applications?

2. Method

2.1 Research Pattern

The goal of this study conducted as a case identification study is to study the opinions of 30 6th-grade students and 2 science teachers, who participated in creative drama application developed and implemented by the researcher, regarding the use and effectiveness of such approaches. Since the study involves gathering of opinions of students and teachers regarding the use and effectiveness of creative drama, it is referred to as a case identification study. On the other hand, the observation, interview and document analysis among qualitative data collection tools were used in identification of the opinions of students and teachers regarding the application process.

2.2 Participants and Environment

As described above, the process conducted jointly with students and teachers was executed within the scope of a 4-hour science and technology class and in a special class environment designed as a science and technology classroom.

2.3 Content

Process oriented evaluation was used within the scope of lesson plan prepared to suit the creative drama method and based on the constructivist approach with the subject "Conductors and Non-conductors". Evaluations performed in the results section of the lesson plan were carried out in focus of the process evaluation.

2.4 Process of Education

Stages of plans used during the study performed by Özdemir & Üstündağ (2007) were taken into account when preparing the lesson plan. After the lesson plan suitable for creative drama was prepared, the view of a field specialist was acquired and the introduction, development and results (evaluation) sections of the plan were identified and necessary corrections were made.

2.5 Data Collection Process

The study was conducted by implementing a lesson plan prepared with the use of creative drama within the scope of the *Conductors and Non-conductors* subject with 30 6th grade students. For observation of the process, codes were created by focusing on the participation of students in the performance activities, roles and responsibilities in group exercises, their contributions to the developed process, stories formed during the activities performed.

2.6 Data Analysis Plan

Focus group interviews were performed with the nine students with high course success and rate of participation in activities and their views regarding the use and effectiveness of creative drama applications were sought. Different themes were formed from the data and codes acquired at the end of interviews and their frequency values were identified. During the research process involving the monitoring of these nine students, it was attempted to determine their views regarding the use and effectiveness of creative drama from the data acquired by observing whether the students comprehended the goals of the activities, their participation, responses given to the discussion inquiries, their roles and responsibilities during group exercises, their use of science notebooks, their use of materials.

3. Findings

According to the descriptive analysis of focus group interviews with, students actively participated during the lesson in terms of the use and effects of creative drama (55.5%). Most of the students (88.8%) indicated that such application allows them to learn through actions and experience and that they learned more consistently and easily and their level of success increased due to these applications. Moreover, in relation to the effect of the application, students indicated that they were able to act independently and freely, thus their level of anxiety was reduced, they seized the chance to express themselves (44.4%). Findings of the content analysis also support these findings.

Students indicated that they found the activities to be relative to their areas of interest, enjoyable and fun (44.4%). Views regarding the activities are also supported by the findings of the content analysis.

In regard to the difficulties encountered by students during the process, a portion of the students (22.2%) indicated that the application should have been carried out in a more spacious area, the games could be played with certain difficulties in a confined space. Findings of the content analysis also support these findings.

Students indicated the advantages of the creative drama to be the possibility of thinking over alternative situations with life-examples (44.4%). A portion of students (33.3%) stated their views that such application would prove to be significantly useful if implemented in other classes as well. Findings of the content analysis also support these findings.

In regard to the group work, students indicated that they provided views from different perspectives, helped in creating a team spirit and that evaluation activities performed after group exercises were quite extensive (55.5%). Findings of the content analysis also support these findings.

3.1 Findings of content analysis of focus group interviews with students

When the students were asked about the effects of conducting the lessons in such manner, the students indicated that they were able to better understand the lesson, could learn more easily, were able to learn through actions and experience, exhibited more sharing. Studies performed in the field show that the use of creative drama method in Science and Technology education does not give the students an opportunity to bring forth their hidden energy, to discover themselves and to learn through actions and experience (Dakilic & Gönen, 1998). Students express it as follows:

"My Master, I think this was very good, because there were students that never participated in the classes, now even they took place. And it also was more consistent. (Girl1)."

"It was an environment with high level of participation in the class and conducting the lesson in such manner resulted in consistency. For instance, whenever I encounter something in my daily life that relates to the subject, I instantly remember the activities we performed and I remember those times (Boy2)."

"A person generally keeps either very happy or very sad memories. We had a lot of fun here. Therefore, the experience became permanent. For example, the books provide information that seems very complex, however, we learned that information more consistently here through enactments. (Girl 3)."

Among the advantages of creative drama in terms of teaching Science and Technology; group exercises performed during the drama workshops ensure social development, information provided in science and technology books can be taught in an easier and more enjoyable manner through games used in the drama method. Students indicated that they could learn more easily and with more joy with following statements:

"I think these activities encourage us to participate during the lesson. The lessons become more fun. Even our classmates, who do not participate during the lessons very much, began to participate more. We would like to have such activities in other classes as well. (Girl 4)."

"For example, the most loved class is the physical education, because we learn about the basketball by playing it. The science class is also alike as we learn while having fun, making improvisations, having various activities."

For instance, if we only read the rules for playing basketball, we will not learn how to play the game. It is the same here. When we learn all this knowledge in such manner, we are able to apply that knowledge in our daily lives. Thus, we have more practice here than during the normal classes (Girl 2).

Bentley & Watts (1989) defined the advantages of using creative drama method during science and technology classes as increasing the verbal communication and providing a possibility for students to share their experiences with the world. The students' views also support these studies. Students explained the reasons for their liking of such activities as follows:

"All of us were focused on the activities. The fact that there are many different activities allows for everybody to find an activity from their field of interest and participate in the class (Boy3)."

"I liked most the card drawing game with the drama activities. However, not knowing the answer to a question and having to pass the card to another person in the group did not feel very good. I was embarrassed when I could not answer a question, but during the improvisation there was no environment for us to be afraid or shy of each other (Girl 3)."

Contemporary education approaches aim for the learners to become active, participating, question-asking, questioner individuals able to work in a team, able to learn to study, able to learn the ways and methods to acquire knowledge and able to become excited when acquiring knowledge. Nowadays, the creative drama is being implemented as seen to be a student oriented method that makes the individual participate actively in the learning process, gives the opportunity to learn through actions and experience, to learn how to study, to realize themselves and to be a creative, productive individual; an approach that, shortly, contributes to the development of an individual's all aspects (Kaf, 2000).

Beyond that, teachers also have very important tasks in the application of creative drama methods. Preparing a suitable program is very important in this process. Students indicated the importance of the preparation of a suitable program as follows:

"For example, we would like to have the lesson conducted more freely. We freely performed exercises without boredom. For example starting the lesson by making us walk around in the area for warm-up significantly helped us to focus on the lesson. We add some things according to our wishes but we also know the goal of the lesson. (K2)."

The creative drama method is a method that helps the students to discover themselves as well as the teachers to discover their students better. Observations show that among all students there are those who like role playing, shy ones, ones that are more capable in games. Observation of such individual differences is very important for students to exhibit their skills.

"Being in a different environment increased everyone's participation and in this way it was a bit different from the activities we generally perform in class. It was nice to have a different environment and we loved to perform the activities with the teacher. It was a lot of fun and very joyful. We want to have more other activities (Girl 3)."

"There was an environment for everyone to exhibit their skills more and to show their knowledge freely. I think the environment was very suitable for everyone and everyone could achieve satisfaction. (Girl 2)."

When the students were asked about the things they liked most in the process, they indicated that they enjoyed the variety of activities, the games were entertaining, and the fact that their opinions were collected in evaluation. Students express it as follows:

"For example, I like to imagine a lot. You are also very important here. You are very entertaining and at the same time your dialog with us in the class is very nice and it is very effective (Girl 1)."

3.2 Findings of the descriptive analysis of documents

When the roles and responsibilities of students in group exercises were being determined, they were requested to

evaluate their groups using the evaluation forms. Students evaluated following eight criteria in their group

evaluation forms: The criteria are as follows: aware of each other's work, distribution of tasks is equal, carries out responsibilities, respect each other's ideas, compatible with each other, respectful and tolerant, evaluate their work together, work productively and make cooperative decisions respectively.

Table 1. Values obtained from the group evaluation forms

Criteria	Item 1	Item 2	Item 3	Item 4	Item 5	Item 6	Item 7	Item 8
Mean	4.52	4.26	4.69	4.91	4.37	4.91	4.96	4.52

When the mean values calculated from the points given to the items according to the responses of students (frequently (4)/all the time (5)) are reviewed, it can be seen that students are aware of the work of team mates, the task distribution among the team is equal, each team member executes their responsibilities, team members respect each other's ideas and are compatible with each other, behave respectfully and tolerantly, everyone's work is evaluated jointly with the team members, team members work productively and team members take decisions cooperatively.

3.3 Findings of the content analysis of documents

During the study the students were requested to write stories about "traveling by train" and to fill out self-evaluation form following the creative drama activities in order to evaluate the process and these forms were analyzed as documents. When reviewing the stories, the students were seen to utilize a scientific language and take advantage of their imagination. Students' indications provided in the self-evaluation forms are given below;

What did I do during the activity?

Creation of a versatile learning environment during the study ensured inclusion of activities that provided for active participation of students. Different groups were formed and game and improvisation activities were performed. Active student participation was ensured during this process. Full student participation in game and improvisation activities was observed. Thus, the students were given a part in the process and an opportunity to learn through actions and experience.

"We wrote down our dreams and enacted them in drama. We continued to perform drama. Our teacher handed out papers. The papers contained the properties of conductors and non-conductors and we attempted to find the substances they are attributed to (Girl 1)."

What did I pay attention to during the activity?

In this section students indicated that they paid attention to the fact that while performing improvisations, they were related to the subject and the theoretic knowledge as well. These activities performed by students in relation to the subject and the information were effective in remembering the subject, increasing the permanence of learning, relating to daily life.

"When performing this exercise I was careful to respect my teammates, take into account their opinions and not to interrupt them (Boy 4)."

What did I learn from the activity?

When reviewing the statements of students, it can be seen that students were able to describe what they had learned from the activity using a scientific language. Keeping the science notebooks within the scope of activities suitable for the constructivist approach ensures that students make clear and net statements.

"I have learned a lot from this exercise. For example, I have learned about the properties of conductors and non-conductors (Boy 2)."

In this section of the self-evaluation performed after the activity students express their opinions that the activity was entertaining. This shows that the students' perceptions of the lesson have a positive tendency. In terms of simplification of learning, students indicated that they found the activities to be simple and educating.

"The things I liked about this exercise is performing activities together, reinforcing the knowledge and performing drama (Girl 1)."

What are the things that bothered me about the activity?

Students indicated that they were not bored at all by the plans prepared in terms of multiple various activities and games and that the process was very entertaining.

"I think it was very fun to have activities with my Teacher. We had fun and were not bored at all. The thing I loved the most is being together with my teacher and my classmates, it made me very happy (Girl 2)."

It can be seen that students are responsible for their in-group behavior during the activity implementation process and that they criticize unsuitable behaviors.

Self-evaluation is an approach that helps the individuals to discover their own skills. Application of self-evaluation forms within the scope of creative drama activities, which constitute an effective method for development of reflective thinking skills, was more suitable. Self-evaluation requires the students to evaluate what they have done in school, how they were thinking and how they performed the activities. The students had an opportunity to evaluate their improvisations, games and other activities by means of the self-evaluation form.

3.4 Findings of content analysis of focus group interviews with teachers

When researching the effects of creative drama on the interest in the study, semi-structured detailed interviews were conducted with 2 science teachers using the interview forms prepared with regard to the process.

When the teachers were asked what they did when preparing for the lesson, teachers indicated that they used guide books, the Internet, prepared short quizzes for evaluation, prepared their own plans and indicated that they were able to motivate the students more in such way.

"I prepared and use my own plans and archives. There are motivation, discovery, definition sections. Students have a better motivation for the lesson (T1)."

When the teachers were asked about their participation in scientific meetings and activities, the teachers indicated that they attended scientific method related meetings, seminars about the regulations and project competitions.

"I used to attend when preparing my thesis. I generally attended meetings regarding scientific methods. Two time I participated in notification presentations. Participated in the Clean Sea project. Then we presented it to students in the school. I also went to the project fair. (T2)."

When the teachers were asked about the contributions of such activities and scientific meetings, they indicated that such activities create awareness, increase experience.

"We gain new knowledge. There are some that are useless. There were some activities where I asked myself why I went there at all. I developed myself even more when preparing my thesis, my subject was creativeness. Creative drama is also included. Beyond that, I also studied analogies, writing creative stories, and creative drama exercises. (O2)."

When the teachers were asked about the advantages and disadvantages of the creative drama applications, they indicated that disadvantages can be listed as difficulties with improvisation, the need for an adaptation period, having too little time to explain a lot of subjects. Beyond that, they indicated that the method was important in terms of student motivation and reaching out to everyone.

"You are able to reach more students but the time is problematic. There are so much things that can be exercised through creative drama but there is no time. (T1)."

"There is a problem with improvisations, it is ineffective when performed once, it needs to be done continuously. It needs to be applied to the curriculum. (T2)."

Teachers also indicated that visuals are very important, the need for materials and costumes, and that classes are very crowded. When the teachers were asked why it is important to have creative drama applications during science classes and they indicated that the science class is the class where creative drama is most effective.

When the teachers were asked about the aspects they most liked about the applications and that had most effect on them, they indicated that the applications were able to attract the attention of the most uninterested students, increased the success, included teachers in the process as well, simplified their jobs, provided them an easier teaching experience and allowed for less repetition.

"Drama seems to make our job more difficult, but actually it simplifies the job. We do not repeat because we repeat even less. (T1)."

Finally, when the students were asked about situations they were not able to acknowledge before but discovered after the application and requested to perform evaluations on the matter, they indicated that their conscience was clear, they were proud of themselves, their expectations were increased and they discovered their own creativeness.

4. Discussion and Suggestions

The drama method was applied in various subjects within the scope of the science and technology courses and it was indicated that student successfulness, course incentive increased, the classes became more interesting as a result of the applications, which helped the students to remember what they learned more easily, simplified the learning process, and concluded that the applied drama activities ensured extremely consistent learning.

Students need to become active, participating, question-asking, questioner individuals able to work in a team, able to learn to study, able to learn the ways and methods to acquire knowledge and able to become excited when acquiring knowledge as per the modern education approaches. Students addressed the teacher and the environment when expressing their views regarding the process in the study. Therefore, the teacher needs to be able to prepare a suitable environment and to have a good communication with the students. Teachers have very important task in planning, applying and evaluating the education program based on creative drama method. The creative drama method is a method that helps the students to discover themselves as well as the teachers to discover their students better. This is also very important in observing the individual differences.

Bringing up the students as literates in science and technology or scientific literates, regardless of their individual differences, can be achieved by means of the creative drama method (Ozdemir & Ustundag, 2007). The vision of the Science and technology program is to bring up all students, regardless of their individual differences, as literates of science and technology. Therefore, creative drama is important in creating science and technology literate individuals.

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Creativity and knowledge in architectural education

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Abstract

One of the most important problems in architectural education is that students do not have the ability to transfer theoretical knowledge into practice. Architectural students generally have some difficulties about creating their own design ideas due to their habit of learning by rote instilled by their pre-university education.

Students cannot find enough encouragement and ability to develop individual projects as a new design which uses all kinds of information from previous periods. For example, in architectural education students need to use the basic design principles learned from the first level all the way up to the final level, and even for their whole lives. Students have to acquire some skills such as drawing and design in addition to their theoretical training. In their architectural education, students need to design and draw through learning by trial and error in addition to their theoretical training. In this study, the emphasis will generally be on the rules of transferring theoretical knowledge into practice, and some advice will be given on this subject.

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Peer-review under responsibility of the Sakarya University.

Keywords: architectural education; design; theoretical knowledge

Introduction

In the last few decades, universities have made important efforts to improve the quality of design education. Concepts such as innovative ideas, emotional intelligence and creativity have started to be seen as very important in recent years. (Yürekli and Yürekli, 2004; Casakin and Kreidler, 2009). Creativity and design courses are the backbone of architectural education. Architectural design involves some concrete skills, including knowledge of drafting, architectural materials and structural elements, as well as other abstract elements such as time, space, environment and character (Yürekli and Yürekli, 2004). The architectural design process needs to interpret the theoretical knowledge, foresight of future and the culture of the person involved. Students who have an education based on memorizing from the kindergarten to university will have some difficulties with this, particularly at the beginning of the design process, and in making an interpretation of theoretical knowledge. One of the aims of contemporary higher education, and design education in particular, includes directing students to tools which can stimulate research for creative solutions, as well as providing a solid scientific basis for the decision-making process. Every student should be able to implement this design process when the design problem is put forward. The required knowledge is given to the student in the theoretical courses in the architectural department curriculum, but theoretical knowledge which is memorized and then forgotten in order to pass the course without acquiring adequate motor skill abilities, even with revision, cannot be included in the design process. When theoretical knowledge is given to students during the design process as and when the students need it, the solution to the design may provide better results. Generally, this involves the implementation of learning to design through trial and error, and allowing criticism of the project or design instead of learning to design in the design studios from tutors.

In the study of architecture as part of the design process, in order to ensure the transition between theoretical and practical emphasis on the practical application of theory in architectural education, as well as to give a short historical summary of the architectural education, advice will be given on the deliberate relationship between creativity and knowledge in architectural design and how to use it.

Architectural Education, Creativity and Knowledge

A method similar to general 20th century architectural education was implemented for the first time in the The Ecole des Beaux-Art Architectural School (Uluoğlu, 1990). The relationship between the student-lecturer (master-apprentice) started to gain importance at the Bauhaus. In the Bauhaus Teaching Theory, which was developed with Gestalt perception hypothesis, students had an education through stages covering all the

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necessary practical and scientific education for apprenticeship, journeyman and master. The Bauhaus Teaching Theory brought some innovations to architectural education, unlike the Ecole des Beaux-Art Architectural School Education style, as instead of the imitation of classical architecture to actively create a new project by students, the master was more passive, being a guide to the student in the design process. From the 19th century onwards in Western Europe, the architectural profession and education involved improvement and change with small difficulties. Architectural education in Turkey, and the continued relationship between master and apprentice started with the trial and error method in 1883 at “Sanayii Nefise Mektebi (Mimar Sinan Üniversitesi)”, then in 1942 at “İstanbul Teknik Okulu (İstanbul Teknik Üniversitesi)”, then in 1945 “Yıldız Teknik Üniversitesi” and in 1956 at “Orta Doğu Teknik Üniversitesi” (Dikmen, 2011). This has improved and changed day by day with the new architectural departments in Turkey.

The concept of creativity is very important for the architectural profession, and architecture is also sometimes used instead of creativity as meaning. From the beginning with “De Stijl” in the 20th century, almost all of architectural understanding has tried to provide some solutions concentrating on necessity for a small group people. “De Stijl”, “Bauhaus”, “Purism”, which emerged in the 20th century, and functionalism are the common bases for this architectural understanding (Erkman, 1982), and are still used in many educational institutions. This situation is often not good enough, with creativity the most relevant factor in terms of psychological and social needs (Ayıran, 1985). Functionalism in the 21st century, despite the effectiveness of other current architectural understandings (post-modernism, etc.) is still used because functionalism is a necessity but not sufficient. Nowadays, the concept of creativity has to find a new architectural solution for the wider society.

In general, the meaning of creativity is emerging as a feature most looked for especially in the world marketing sector (Craft, 2003). People are now spending money by tending towards different, innovative products. According to the National Advisory Committee for Creative and Cultural Education (NACCCE), the definition of creativity is “imaginative activity fashioned so as to produce outcomes both original and of value” (NACCCE, 1999; Craft 2003). MacKinnon describes creativity as a combination of arts, sciences, technology, and psychological testing (Mondy et al., 1953, Alomar, 2003).

The interaction consist of the following variables inherent in creativity; cognitive (intelligence-information-technical skills-specific capabilities), personal (political and religious factors-cultural factors-socio-economic factors) and environmental (intrinsic motivation-belief-personal creativity feature) (Eysenck, 1994; Kahvecioğlu, 2001; Meng, 2007; Önal, 2011). If student don't learn to understand the cognitive variables of creativity such as knowledge and technical drawing skill, she/he cannot be successful enough at design, due to a lack of ability of the structural knowledge and presentation even if she/he has the innate ability of creativity. Architectural education should give students cognitive development, and the ability to use it in the creative process.

3. Conclusion

Generally, creative thinking is believed to occur within a good knowledge hardware. However, every person who has the knowledge cannot create innovative designs. For that reason, it has been shown in a study by Weisberg (2004) titled “Creativity and Knowledge: A Challenge to Theories”, knowledge does not bring creativity every time, and it is not possible to explain creativity exactly. Weisberg (2004) said, ‘if we wanted to explain the problem maybe we could say “creativity is a phenomenon. In architectural education, if the knowledge is given to the student first, then a creative action is expected from student after a few weeks, the solution is often not so good, and suffering from the lack of integration of knowledge and application. The result of the design can be more successful if you provide the knowledge when the student needs it. But of course, we must not ignore some personal flair or creativity. It is not possible to expect the same improvement from every student, but it is observed that in design courses, knowledge which is given at right time is from increases the success ratio of the result of the design.”’

As a result, giving the knowledge to the student on time as a seminar etc., referring the student to research and gaining the habit of doing research, providing integration between theoretical and practical courses, and using theoretical knowledge in the practical application of design will promote a certain amount of creativity. All authors are required to complete the Procedia exclusive license transfer agreement before the article can be published, which they can do online. This transfer agreement enables Elsevier to protect the copyrighted material for the authors, but does not relinquish the authors’ proprietary rights. The copyright transfer covers the exclusive rights to reproduce and distribute the article, including reprints, photographic reproductions, microfilm or any other reproductions of similar nature and translations. Authors are responsible for obtaining from the copyright holder, the permission to reproduce any figures for which copyright exists.

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Croatian students' awareness, understanding and attitudes regarding European dimension in education

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Abstract

This paper will present the results of a study that examined student teachers awareness, understanding and attitudes regarding the concept of the European dimension in education. The survey examined student's perception, level of awareness about the key documents, their attitudes about indicators and knowledge of the key terms of the concept. The results show that students associate the concept with the standardization of education systems at the EU level, they are not informed about it and have no awareness about the key documents. On the other hand, students stated positive attitudes about the integration of the concept in the national education system and future teacher education.

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Peer-review under responsibility of the Sakarya University.

Keywords: European dimension in education; student teachers; awareness of the European dimension in education; understanding of the European dimension in education; attitudes regarding the European dimension in education.

Theoretical background

The idea of the European dimension in education has been present in the European educational policy for several decades. The primary idea of that concept was designed as a multilateral project in the Council of Europe and the EU in mid-80s of the last century, as a result of an effort to improve the European integration processes the connotation of which were mostly economic and political at the time (Zidarić, 1995). The concept of the European dimension in education can be defined as a dynamic and evolving concept which relates to the education of students about Europe, in Europe and for Europe (Shennan, 1991), while Petričević (1991) points out that the introduction of the European dimension in education attempts to contribute to the development of partnership and to the achievement of the true creation within the single European market, as well as to students' easier transition from schools to the real life. In addition to that, it is emphasised that the European dimension has to *"strengthen in young people a sense of European identity and make clear to them the value of European civilisation and of the foundations on which the European peoples intend to base their development today, that is in particular the safeguarding of the principles of democracy, social justice and human rights"* (Savvides, 1998: 304). Ledić&Turk (2012: 267) stress out that it is possible to define the European dimension in education specifically as a *"contribution to the development of the (European) knowledge society by learning foreign languages, encouraging mobility, cooperation, equal educational possibilities and lifelong learning"*.

On the other hand, Theiler (1999) explains how the attempts of the EU to introduce the European dimension in member states school curriculums have produced very little results. Theiler (1999) also claims that most attempts have been unsuccessful because of resistance from national governments. *"The few measures that were both adopted and put into practice centred on student exchanges and language learning rather than on increasing the share of 'European content' in national curricula. Indeed, so strong and tenacious was the prevailing resistance to their curriculum-centred ambitions that, by the mid-1990s, the Commission and the EP themselves had largely abandoned their push for them"* (Theiler, 1999: 333).

Ledić&Turk (2012) point out that the concept of the European dimension in education remained almost neglected and unexplored in the Croatian field of science and research, although there are some research about Croatia and the European integration processes. For example, in a research from 2011 – Is the school creating good citizens? – demonstrates the low level of euro-enthusiasm among Croatian high school graduates, the majority of whom do not have positive expectations regarding the European Union and *"do not recognize or understand the possible benefits of the European integration of Croatia"* (Gong, 2011: 94). On the other hand, a

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research done by Bjelajc and Pilić (2004) about identity relations and wishes regarding the Croatian accession to the EU, shows opposite views demonstrating that most Croatian citizens are in favour of the Croatian accession to the EU. That wish is more frequent among young than among older examinees, especially among students (98% of students answered “yes” to the question “Croatia in the European Union – yes or no?” or opts for the answer “mostly yes”). It turned out that the assumed connection between students’ wish that Croatia joins the EU and their social and residential characteristics and individual identity types, is either non-existent or is very small and insignificant.

Research methodology

Upon noticing the importance of informing students about the EU and the concept of the European dimension in education, a research was performed the aim of which was to explore how well informed are students at the Faculty of Teacher Education and the Faculty of Humanities and Social Sciences of the University of Rijeka about the European dimension in education, how well do they understand it and what are their attitudes regarding it.

A total of 318 examinees participated in the research, 81.8% of whom were students at Faculty of Humanities and Social Sciences and 18.2% of them were students at the Faculty of Teacher Education in Rijeka. The majority of examinees were first year students at integrated undergraduate programmes, 52.5% were first year students at graduate programmes and 43.7% were fourth year students at integrated programmes. The rest of examinees were second, third and fifth year students. The gender structure was 16% male students and 84% female students.

For the purpose of gathering data a survey questioner was used which in addition to the general questions about the examinees (study programme, study level, year of study, gender, age, previous education) contained 7 question about how well informed is the student population about the European dimension in education, how well do they understand it and what are their attitudes regarding it, in the form of open and closed questions (Likert scale). The survey was conducted in May 2013. Data gathered by the survey questioner were processed in the programme for the analysis and processing of statistical data "IBM SPSS Statistics".

Results and discussion

1. Understanding the concept of the European dimension in education

The first question in the questioner required students to explain “European dimension in education”. Since it was the open type question, answers are categorized in 12 basic categories (Table 1).

Table 1. Understanding European dimension in education

Category	Subcategory	Answer frequency	Total within category
1. STANDARDS	Standardized knowledge, rights, education, documents, diplomas	111	111 (29.2%)
2. MOBILITY	Mobility and exchange	54	62
	Cooperation between countries and institutions	8	(16.3%)
3. I DON'T KNOW	I don't know what is EDE	34	34
	Higher education quality	12	(8.9%)
	Using new, contemporary methods and innovations in teaching/learning	11	
4. EDUCATION AND SCHOOLS	Practical teaching and field class	2	33
	High degree of education	2	(8.7%)
	Other (supervising the work of education workers, encouraging the development of education, free schools, investing in schools, projects, preliminary exams)	6	

		Relation and influence of the EU on the Croatian education system	9	
		Education about, in and for Europe	8	
5.	EUROPEAN UNION	EU funds	4	28
		Accession to the EU	2	(7.3%)
		European and Croatian identity	2	
		Other (transfer of the EU's ideology to the non-European countries, new education system in the EU, education about the EU)	3	
		Informatization and technology	8	
6.	KNOWLEDGE SOCIETY	Availability of information and knowledge	5	22
		Knowledge society	4	(5.8%)
		E-learning	3	
		Lifelong education	2	
7.	BOLOGNA PROCESS	Bologna Process	16	21
		ECTS scores	5	(5.5%)
		Equal opportunities for all	8	
8.	POSITION OF PUPILS AND STUDENTS	Higher and better opportunities for students	7	20
		Education adjustment to the labour market	3	(5.2%)
		Other (education system adjustment to the needs of students, involving students in the programme creation)	2	
		European values	3	
		Multiculturalism	3	
		Tolerance	3	
9.	VALUES	Diversity	2	19
		Equality	2	(5.0%)
		Competence	2	
		Other (flexibility, interdisciplinarity, democracy, accessibility)	4	
10.	LANGUAGES	Learning foreign languages	11	11
				(2.9%)
11.	NEGATIVE ATTITUDE	<i>"Platitude in accordance with the latest trends from Brussels"; "Some political nonsense"; "Tendency to make students stupid and exploit them"; "Attempt to bring the young to the EU side"; "Bureaucratic vocabulary devoid of meaning"; "European dimension in education – negative and stupid"; "Method that will help the World Bank take away the identity from an individual"; "Evil that poisons the minds of youth and distances them from duties to their countries"; "Capitalisation and commodification of knowledge"; "What a failure, this Bologna"</i>	10	10
				(2.6%)
		Guidelines relating to economy, sustainable development	2	
		Change	1	
		Collapse of Bologna	1	8
12.	OTHER (non-specific)	Validation	1	(2.1%)
		Support programmes	1	
		Expanded view of the global problematic	1	
		Learning and education in interpersonal relations	1	
TOTAL COUNT OF RECEIVED ANSWERS:				379
				(100%)

The above table illustrates that the largest number of students (around 30%) links the European dimension in education with the standardization of education systems on the level of the EU (standardized knowledge, rights, diplomas, documents, etc.). Apart from that, students link the European dimension in education with mobility and exchange on the EU territory (16.3%). It is important to mention that studies of the examinees in question are designed in accordance with the criteria of the Bologna Process, which aims to connect the European educational space, and it is possible that their view of the European dimension in education is dominantly from that focus.

Some examinees (cca. 15%), recognized and described some of the most important determinants of the European dimension in education, such as learning foreign languages, European values, equal opportunities for all. If we start from the approach defining the European dimension in education as a concept which contributes to the development of the European society of knowledge, European values, dimension of identity and contemporary approaches to learning (Ledić& Turk, 2012), it appears examinees are heading towards an adequate understanding of the European dimension in education.

Still, it is important to mention that 8.9% of replays ($f=34$) falls within the category “*I don’t know what is the European dimension in education*” which is an indicative information that raises the question of the orientation of study programmes for the education of students about the European dimension in education. Although a relatively small percentage (2.6%), some of the students expressed a negative attitude towards the European dimension in education. Such results are especially alarming, if we consider the fact that those examinees are students – future teachers who should be one of the main instigators of (European) changes in the future education system.

Table 2. Awareness about the European dimension in education

Awareness about the European dimension in education		YES	NO	NO REPLAY	M	SD
		%				
1.	Student awareness of the contents of the European dimension in education gained during high school education	5.7	94.0	0.3	1.94	0.232
2.	Student awareness of the contents of the European dimension in education gained during higher education	9.7	87.7	2.5	1.90	0.33

Table 2 shows the awareness of students about the European dimension in education given the level of education within which they gained such information. Table shows relatively low awareness about the European dimension in education: 5.7% of examinees gained information during their high school education within classes such as Politics and economy, Geography and foreign languages classes, and 9.7% of examinees gained information during their higher education within different courses (International relations ethics, Didactics, Sustainable development pedagogy), at their lectures (comparing education in Croatia with education in other European countries), by independent learning (researching and writing about the Bologna Process) and by participating in the Erasmus program or by seeking information about it.

Analysis of the *National Curriculum Framework for Pre-school Education and General Compulsory and Secondary Education* (Fuchs, Vican& Milanović Litre, 2010) points to a small share of contents connected to the European dimension in education. Contents were mostly focused on European history, cultural heritage and integration. Some students mentioned they gained certain amount of information during their high school education from their Politics and Economy teachers who play an important role regarding their political literacy and making them more prepared and equipped for the European Union (Gong, 2011). Unfortunately, upon entering higher education situation does not change much and the established lack of awareness continues.

2. Understanding determinants of the European dimension in education

Table 4 shows student estimation of the concepts they view as determinants of the European dimension in education. Almost 89% of students believe respecting diversity is the greatest determinant of the European dimension in education, and somewhat smaller percentage of them (87.4%) listed knowing foreign languages and human rights, as well as tolerance, mobility and mutual cooperation (87.1%). On the other hand, local identity (15.7%), fight against crime (13.5%) and national identity (12.6%) were estimated as concepts that determine European dimension in education in the smallest degree. Whether local identity includes the European dimension of education, 13.2% of students were not able to estimate, and 11.7% of them were not able to determine whether pacifism and war prevention, as well as national identity, fall within the determinants of the

European dimension in education. It seems questions of identity (European, national and local) represent a special challenge in this context.

Table 3. Determinants of the European dimension in education

Determinant		1+2	3	4+5	0	M	SD
		%					
1.	Knowing foreign languages	0.9	8.5	87.4	3.1	4.37	1.054
2.	Mobility and mutual cooperation	1.2	8.2	87.1	3.5	4.34	1.085
3.	Equal educational opportunities	2.8	9.1	84.2	3.8	4.27	1.163
4.	Lifelong learning	5.0	15.4	73.3	6.3	3.94	1.399
5.	Contemporary technology	2.2	16.5	76.6	4.7	4.02	1.215
6.	Knowledge-based economy	7.6	23.6	57.9	11.0	3.48	1.564
7.	Interculturalism	6.9	14.5	68.5	10.1	3.73	1.589
8.	Multiculturalism	3.1	10.7	77.9	8.2	4.01	1.455
9.	Democracy	4.1	14.2	77.4	4.4	4.19	1.282
10.	Human rights	1.5	7.5	87.4	3.2	4.46	1.089
11.	Tolerance	2.2	7.5	87.1	3.1	4.43	1.095
12.	Social justice	2.8	11.9	81.5	3.8	4.27	1.192
13.	Respecting diversity	1.5	6.6	88.4	3.5	4.45	1.107
14.	Pacifism and war prevention	9.4	14.6	64.3	11.7	3.63	1.694
15.	Fight against crime	13.5	17.9	59.8	8.8	3.53	1.604
16.	European identity	8.5	17.7	63.4	10.4	3.61	1.587
17.	National identity	12.6	20.8	54.9	11.7	3.32	1.634
18.	Local identity	15.7	23.0	47.9	13.2	3.12	1.650
19.	E-learning	3.8	12.4	77.2	6.7	4.01	1.385
20.	Learning social responsibility	4.8	13.7	74.3	7.3	3.92	1.421

3. Attitudes on the European dimension in education

Table 5 shows the results of a survey on various aspects of the European dimension in education. Data indicate that the largest percentage of students (70.9%) do not feel competent enough to discuss the European dimension in education, which is further supported by data indicating that 55.6% of students do not feel ready to implement that concept in their future work. Regardless of those indicators, 61.3% of students believe the concept in question contributes to the development of knowledge society and that it is important for strengthening European educational policy (53.8%). These results indicate that although most students do not feel competent enough to discuss and implement this concept, they do have a positive attitude about it in one wider (European) context. Such results indicate the need to implement structural measures, primarily changes in educational programmes, which will enable the implementation of the European dimension in education on all levels.

Aforementioned positive attitudes on the European dimension in education should be linked with examinees' attitudes on the question of implementing the European dimension in class. Survey shows that more than one third of students (34.2%) do not agree with the claim that introducing the concept of the European dimension in education is unnecessary, while 27.7% of them cannot estimate whether introducing the concept of the European dimension in class is really necessary. The remaining 11.3% of students believe there is no need to implement the European dimension in education. Similar to the previous results, these too point to the importance of student education regarding this concept, especially students who are studying to be teachers.

Table 4. Attitudes of examinees on the European dimension in education

Claims		1+2	3	4+5	0	M	SD
		%					
1.	European dimension in education contributes to the development of the knowledge society.	5.3	22.3	61.3	11.0	3.47	1.515
2.	European dimension in education nourishes various dimensions of identity (local, national, European).	12.3	27.7	44.4	15.7	3.01	1.616
3.	European dimension in education opens the door to contemporary approaches to learning (e-learning, learning social responsibility).	4.1	16.4	70.8	8.8	3.75	1.456
4.	European dimension in education shall weaken the learning on local and national identities.	28.3	26.4	26.4	18.9	2.41	1.601
5.	European dimension in education is important for strengthening European educational policy.	6.6	21.7	53.8	17.9	3.17	1.748
6.	European dimension in education shall disturb the values and tradition of the Croatian education system.	37.7	26.9	17.7	17.7	2.16	1.489
7.	I feel competent enough to discuss the European dimension	70.9	11.4	7.0	10.8	1.64	1.134

	in education.						
8.	I feel ready and have acquired enough knowledge required to implement the concept of the European dimension in education in my future work.	55.6	20.6	6.3	17.5	1.72	1.217
9.	European dimension in education broadens the views on various methods of teaching and training.	7.3	26.0	50.2	16.5	3.10	1.631
10.	I believe that introducing the concept of the European dimension in education is unnecessary.	34.2	24.7	11.3	29.7	1.77	1.534

4. Relating concepts connected with the European Union

Table 6 shows the degree in which students are familiar certain fundamental concepts/institutions/organizations of the European Union. Examinees were required to determine their level of familiarity with suggested concepts and to specify what does the given concept stands for, if they have indicated that they are aware of it and that they can define it.

The analysis of this part of the research points to an unflattering level of familiarity with suggested concepts. We can positively stress out only their familiarity with Erasmus programme, which 58.5% of students were able to define. This is not surprising, given the data on the increase of Croatian students' mobility¹²⁴. Still, it is impotent to notice that 7% of students are completely unfamiliar with the Erasmus programme, while one fourth of them have never heard of the concept and cannot explain what it means.

Unflattering for student population is the result indicating that only 3.8% of examinees can define Europass documents, familiarity with which is an important segment of student'/citizen' mobility. Only 12 out of 318 examinees offered (partial) definition of Europass documents which represent a precondition for providing transparency and comparability of acquired skills and qualifications of European citizens. Equally surprising and alarming are the results indicating that students are mostly unfamiliar with concepts such as Eurobarometer (4 out of 318 examinees were able to define the concept) and Eurostat (6 out of 318 examinees), two relatively present concepts in the media, which possibly indicates the exclusion of student population from everyday pursuit of information on the themes significant to the public. Another very significant result is that more than half of students (51.4%) have never heard of the Lisbon Strategy, and 2.9% of them, who claimed familiarity with the concept, have given incorrect answer and listed the definition of the Schengen Agreement.

This surprisingly poor familiarity with concepts connected to the EU, point to a low level of students' political literacy and can be a consequence of their lack of education on these themes (in schools), their poor pursuit of information and personal lack of interest regarding the European topics. If we assume correlation between the level of education and political literacy and have in mind that students are those who make up the more educated part of population, then these data are a reason for an additional alarm.

Table 5. Familiarity with the fundamental concepts of the European dimension in education

Concept		NOT FAMILIAR WITH THE CONCEPT	HEARD OF THE CONCEPT, BUT CANNOT EXPLAIN IT	KNOW THE CONCEPT, BUT CANNOT DEFINE IT	EXACT NO. OF DEFINITIONS ¹²⁵ (frequency and percentage)	M	SD
		%					
1.	Erasmus	7.0	25.5	67.5	186 (58.5%)	2.61	0.617
2.	Eurobarometer	71.7	26.1	2.2	4 (1.3%)	1.31	0.508
3.	Europass documents	44.7	46.6	8.6	12 (3.8%)	1.64	0.636
4.	European Commission	6.1	75.6	18.3	15 (4.7%)	2.12	0.479
5.	European Parliament	1.6	63.3	35.1	39 (12.3%)	2.34	0.506
6.	Eurostat	65.9	30.9	3.2	6 (1.9%)	1.37	0.547
7.	Lisbon Strategy	51.4	45.7	2.9	0 (0.0%)	1.51	0.555
8.	Schengen Agreement	26.4	50.3	23.2	38 (11.9%)	1.97	0.705

¹²⁴ Institute for the Development of Education published data on the increase of Croatian students' mobility and it is estimated that the total number of mobile students in the academic year 2013/2014 shall reach around 4150 students, which represents a significant increase of 38% on the national level in comparison to the academic year 2009/2010.

¹²⁵ The number of correct answers was reached based on the analysis of answers of those students who mentioned they know the listed concept and can define it. Criterion used to categorize correct and incorrect answers was familiarity with the concept.

9.	Council of Europe	7.3	74.9	17.8	2 (0.6%)	2.10	0.490
10	Youth in action	58.5	35.1	6.4	5 (1.6%)	1.48	0.615

Final conclusion

This research which dealt with the level of knowledge, understanding and attitudes of students at the University of Rijeka regarding the European dimension in education, points to the fact that students are mostly ill-informed about that concept, although examinees in question were students whose study areas are closely linked to educational sciences. The analysis has showed that students are poorly familiar or are unfamiliar with the fundamental concepts of the European Union. On the other hand, research also shows that students evaluate the determinants of the European dimension in education very highly and demonstrate mostly positive attitudes regarding the importance of that concept in education and their future work.

This research determined a poor level of familiarity with the European dimension in education, but reasons for such a state have not been identified. A reasonable assumption is that these contents are not included in the study programmes, which is why it is surely necessary to think about the future revision of study programmes in the education of teachers.

A requirement to promote European topics within the framework of teaching contents and to integrate them in handbooks and teachers' education is a demanding task. Implementation of the European idea must include discussion, participation and responsibilities of all involved stakeholders.

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Cultivating learning: a grounded theory of skills acquisition for vocation in modern apprenticeships

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Abstract

Apprenticeship training system involves various parties to ensure that training system run effectively. It is not just training to get the skills to vocation but it is the process of lifelong learning. The learning process will not stop as soon as it is certified but it continues in different location and design in the workplace. We argue that apprenticeships is just that a training system but more than that. Our paper provides a discussion result of modern apprenticeship system research and basic social process behind that. Our research examines what are the main concerns of the apprenticeship trainees and how they resolve it. We implement the grounded theory in exploration of their concern towards what they learn in the Kuala Lumpur Industrial Training Institute and the industry. We also examine why it is happen and how it is happen. Using grounded theory method, our findings suggest that cultivating learning was the main concern of the participant. In term of resolving that concern, respondents need to face various challenges and difficulties in their journey to learn for getting a job and survives in the real life.

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Peer-review under responsibility of the Sakarya University.

Keywords: modern apprenticeship; vocational education; grounded theory, skills acquisition

Introduction

Malaysia needs skilled workers to support the country's development to achieve vision 2020 (Ramlee and Rohana, 2013; Ruhizan et al., 2013; Yao Sua Tan, 2011). The era of knowledge economy and globalization leads to the necessity of human capital, which comprise professional and semi-professional as well as knowledgeable and skilled labor (Brockman, Clark and Winch, 2008; Ramlee et. al. 2008; Wan Seman, 2007). Over the years, the country has relied heavily on foreign labor from Indonesia and Bangladesh to fill positions in plantation and construction industries and also as domestic help (Malaysia, 2010). If employees released from Public Training Institutions (PTI) do not have the skills required by the industry, investors will not be interested in investing in Malaysia.

A study by Ab. Rahim and Ivan Hanafi (2007) quoted a report carried out by the Asian Development Bank on industrial workers in several countries, including Malaysia, revealing that the technical and vocational education apprentice products did not meet the quality standards nor were they willing to work. This may lead to decreased trust among employers in skilled workers, and at a more serious level, it may even cause the loss of potential foreign investors. Thus, the issue of the low quality and quantity of skills trainee output from the Malaysian technical education system should be addressed immediately in order to enhance investors' confidence in our country.

It is generally accepted that in order to achieve the status of a modern nation, a country does not only require highly-skilled workers but also moderate and low-skilled workers (Maynard and Smith, 2004). The subject of skilled workers as described above should not be an issue if they are provided quality training that fulfils the basic and generic skills required by the field of in which they are apprenticing.

1.1 Community Of Practice and Skills Aquisition

Communities of practice is not a new kind of organizational unit; rather, they are a different 'cut' on the organization's structure—one that emphasizes the learning that people have done together rather than the unit they report to, the project they are working on, or the people they know (Wenger, 1998). Learning is about

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becoming a member of certain practices and gaining access to valuable learning, leading to a form of belonging to and being accepted into these practices (Tangaard, 2007). Modern apprenticeship training system emphasizes the concept of cooperation between trainees and instructors also set up systems that make up the community of practice.

1.1. Skills Aquisition processes

In Malaysia, the field of vocational training emphasizes individual skills through experiential learning. Experiential learning or learning by doing something to get experience is based on the notion that individuals have not the understanding of the elements of thought that remain otherwise unchanged but is instead formed and re-formed through experience (Kolb, 1984).

Previous studies show that the formation of micro-skilled workers requires a few levels of mastery. Dreyfus and Dreyfus (1986) for example look at the process of understanding the formation starting from novice to expert through the five stages, which is novice, amateur, competent, proficient and expert. The novice phase is the stage in which the trainee acts only according to the instructions specified. The amateur stage is where he is guided to do something in a clear-cut way. The competent stage is where the trainee is able to perform the tasks assigned. Proficient level trainees are able to see the important aspects of the skills, which can be performed better while expert trainees are no longer, bound by rules, as they are able to accomplish things independently. The model by Dreyfus and Dreyfus (1980) describes the stages which one must go through before he reaches the level of expertise. However, it does not involve other social aspects that support the skills development process.

Brandt, Farmer, and Buckmaster (1993) explain the concept of apprenticeship skills formation through five stages which are different from that proposed by Dreyfus and Dreyfus (1980) but involve similar aspects of staging skills level. The model is divided into two stages i.e. cognitive modeling and behavioral modeling. This stage only involves the observation of the behavior of the instructor. The levelled approach also involves an attempt to gain skills and the process of reflection on what is being done. Gradually, the levels diminish the role of teachers and improve the ability of trainees. The ability of trainees is increased and they are finally able to perform according to the needs of the next level of self-directed learning. The final stage is when they are able to generalize the skills of the trainees in other tasks that require similar skills.

The basis for developing all these skills is derived from the concept of apprenticeship, which includes a variety of fields. Ryberg and Christiansen (2008) also introduced the ladder of participation based on learning to grow by Engestrom (1987). In the early stages, trainees imitate the behavior studied. Then, they go to the next level where the trainees who were able to things themselves with little error begin to dominate. Training for training will give confidence to the trainees, allowing them to enter the next stage. The final stage is where the trainees can already teach the skills they have learnt to others.

The three skills formation process described (Brandt, Farmer, and Buckmaster, 1993; Dreyfus & Dreyfus, 1980, 1986; Ryberg and Christiansen, 2008) adapt the concept of apprenticeship where trainees learn from instructors in stages. The skills upgrading process is seen only in terms of individual skills without looking at the social processes that support the skills development process. Therefore, it begs the question of what are the processes experienced by ITI trainees in order to gain skills?

2.0. Problem Statements

The system implemented is to create high-skilled workers. High-skilled workers are an important asset to the formation of higher-income economic countries. Therefore, it is important to increase the number of trainees in the field of TVE enrollment and improve the overall quality of training offered (Mohd. Gazali, 2011). However, "how the process of the formation of highly skilled knowledge workers through apprenticeships systems in ITI that form the core of Malaysia's human capital be?". This question is important because previous studies (Ministry of Human Resources 2011; Centre for Instructor and Advanced Skills 2007; Rajiv 2009; UPM 2012) found that there is a gap between the skills required by employers and the skills available in the training center includes Kuala Lumpur Industrial Training Institute.

3. Method

3.1. Participants

Respondents were selected based on theoretical sampling in which we believe that those elected can contribute to the substantive area of the study. Selected sampling method is using the snowball and convenient. Respondents selected among the group of apprenticeship trainees from multiple trade under National Dual Training System (NDTS) started an excellence and able to provide information on research topics. Studies conducted to achieve theoretical saturation when the number of respondents reached 32 participants among

administrators, instructors, employers and industry supervisors and the trainees themselves.

Specifically, of 15 apprenticeship trainees, two ITI administrators, 10 instructors, five industry employers and supervisors were interviewed. Respondents were selected from various areas of study offered at selected locations (Kuala Lumpur Industrial Training Institute). We want to see from a variety of individual perspective various areas to see the diversity that exists. Different depth exploration and will give a better meaning to the main concern studied and how they resolve it in a different context.

3.2. Data collection

To achieve the objectives and answer the research questions set we use three main methods of data collection through interviews, observation and document analysis. Interview sessions conducted using a set of open interview question guide developed by us as a guide for initial questions before going to the general question of existence based on the responses given by the respondents. Interview sessions conducted at various locations in accordance with the requirements of the respondents and typically take from 60-90 minutes depending on the space-time respondents. Respondent provided a letter of consent to be interviewed as verification and ethics set interviews to explain the rights of the respondent during the interview.

In addition to the interview memos and notes of observations were also recorded for the researcher to write a reflection of the perceived situation and the concepts developed during the observation. Written memo exists in a variety of shapes and sizes. Researchers recorded memo formation in the concepts exists. Document analysis was conducted to see the appropriate document and may help researchers gain more in-depth information about basic social processes studied.

3.3 Data analysis

Grounded theory methods used during the process of data analysis. We started with writing memos after each interview conducted. This formed the memo different from one another memo by memo based on indicators, incidents, concepts, and categories emerging. According to Glaser (1998) memoing is a core process in grounded theory study. It was written about the ideas that emerged during the coding process, data collection and analysis as well as relationship codes that exist in theory during the process of writing the memo. Codes and categories that emerged was formed and by our own synthesis based on the emerging category. It is different from the common qualitative method based on the analysis of themes that have been formed earlier.

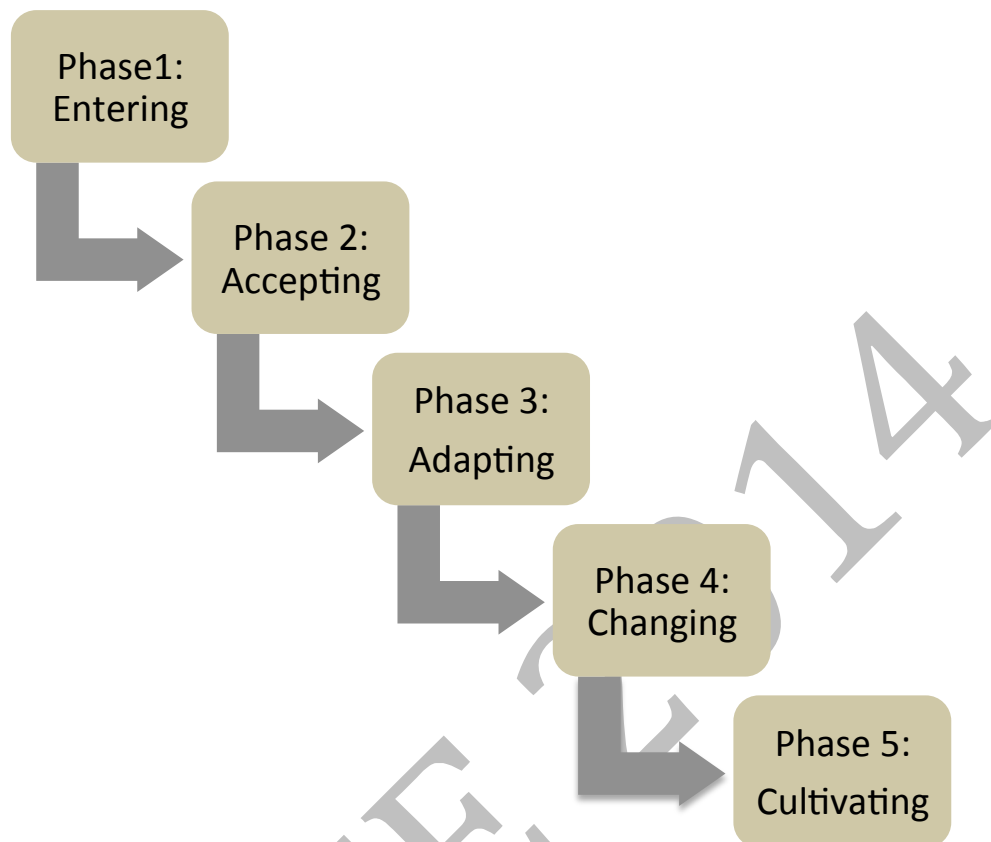
Data were analyzed using the substantive coding involving open coding and selective coding (Glaser 2004). We have also run simultaneously with the constant comparative method in which we compared the incident to incident, incident and concept to concept to concept (Glaser and Strauss, 1967). Every concept that emerges will be compared with other concepts. All of these processes will be compared with each other to see the emergence of the concepts that would eventually form the core categories of the study.

4.0 Findings

Grounded theory in the data emerged when each concept that appears comparable using constant comparative method to see whether there are differences in the characteristics of each of the same concept in different respondents. This comparison is recorded in a memo to facilitate the compilation of memos and coding. Memoing start from first interview until theoretical saturation was achieved. Writing this memo form concepts outlined as

Figure 1.

Figure 1: Basic Social Process of Cultivating Learning



4.1 Entering

There are several categories of trainees who choose to enter the ITI, namely:

- 1) Entering because as interested
- 2) Entering because as the influence of friends
- 3) Entering because as coercive family

Category 1 trainees have interest in the field followed. Many factors support this situation occurs as vocational trainees during the course of secondary school, trainees who had previously failed elsewhere changed the determination to succeed in a new place, and also trainees who already clear that this is an opportunity or an easy way to get a job. For category 2 are trainers usually have friends who really are studying or have graduated in ITI share learning experiences that are very good at ITI. While the third category is the trainer who was forced by the family to enter the ITI trainees involved due to family see fit with the field. Various contexts makes entering the ITI trainees create a concept known as the entry phase.

4.2. Accepting

The second phase, we find that trainees are willing to learn and change based on their own accord. Trainees accept the fact that they had learned in ITI and form relationships with new friends. At this level trainees are willing to accept learning sessions to increase knowledge and skills. Trainees also accept the fact that there initial perception of the different ITI and accept the situation.

4.3. Adapting

In this phase, trainees adapt teaching and learning environment. Trainees have successfully adapted to new friends and also can adapt itself to the learning environment. During this process has already begun cooperative learning because trainees are beginning to choose a compatible friends with him as a friend learn. Learning process occurs in the ITI most by a friend who has been familiar with community of practice. Trainees have successfully adapted to this situation.

4.4. *Changing*

At this stage, trainees receive learning skills as a routine process in life as a trainee. Trainees are starting to accept the learning environment as a result industrial atmosphere emphasized by the instructor on real industrial situations. Trainees who successfully achieve this phase confident with his ability to adapt to the learning environment in the industry.

4.5. *Cultivating*

The final phase is where the trainees to accept the fact that the skills learned are to help them to get jobs. Hence any input acquired knowledge and skills will be associated with future employment in the industry. They are aware of what employers want from them is a knowledgeable and skilled workers as well as having the characteristics of highly skilled trainers at their level.

5. **Discussions**

Basic social process that occurs suspension changed to instructor or supervisor of the industry. These changes involve the instructor or supervisor; the industry plays an important role in the early stages and almost diminished when graduating trainees. This is because trainees have started to master the technical skills and so on, and are able to do their own assigned tasks. These changes are consistent with Ryberg and Christiansen (2008), which show the same process. The process is described in five phases.

Entering

This phase involves the initial phase in which the ITI as a trainee choose to study in the area of interest. At this stage there are certain categories of incoming trainees with interest, in the follow friends, in effect push parents. At this stage, there is also a trainer who is not in the selected program due to limited places available, but due to the keen interest to learn the coach must accept the situation as it is.

The findings are consistent with studies UPM (2012), which emphasizes the early selection process to the public skills training institutes. It was found that the early entry process should begin with an interest in the course. However, this level varies with the early stages of the apprenticeship model of participation and control (Ryberg & Christiansen, 2008) leading to the formation of basic skills through imitation behavior.

Accepting

The second phase, I find that trainees are willing to learn and change based on their own accord. Trainees accept the fact that he had learned in ITI and form relationships with new friends. At this level trainees are willing to accept learning sessions to increase knowledge and skills. Trainees also accept the fact that there initial perception of the different ITI and accept the situation. This stage is consistent with the early stages of the apprenticeship model of participation and control (Dreyfus & Dreyfus 1980; Brandt, Farmer, and Buckmaster, 1993; Ryberg & Christiansen, 2008).

Adapting

In this phase, trainees adapt teaching and learning environment. Trainees have successfully adapted to new friends and also can adapt itself to the learning environment. During this process has already begun cooperative learning because trainees are beginning to choose a compatible friends with him as a friend learn. Social interaction in the ITI happens most by a friend who has been selected. Trainees have successfully adapted to this situation. This stage is also consistent with the early stages of the apprenticeship model of participation and control (Brandt, Farmer, and Buckmaster, 1993; Ryberg & Christiansen, 2008).

Changing

At this stage, trainees receive learning skills as a routine process in life as a trainee. Trainees are starting to accept the learning environment as a result industrial atmosphere emphasized by the instructor on real industrial situations. Trainees who successfully achieve this phase have a confident with his ability to adapt to the learning environment in the industry. This stage is also consistent with the early stages of the apprenticeship model of participation and control (Brandt, Farmer, and Buckmaster, 1993; Ryberg & Christiansen, 2008).

Cultivating

The final phase is where the trainees to accept the fact that the skills learned are to help them to get jobs. Hence any input acquired knowledge and skills will be associated with future employment in the industry. They are aware of what employers want from them is a knowledgeable and skilled workers as well as having the characteristics of highly skilled trainers at their level. This finding is consistent with the self-study process outlined by Zimmerman (2002). At this level trainees are able to modify the context of the new knowledge skills. Learning does not primarily involve the transfer of knowledge from trade vocational schools to practical contexts

of application, but rather the process of gaining increasing familiarity with the objects and persons in and across different communities of practice (Tangaard, 2007).

These findings are also in line with the action plan of the culture of lifelong learning (2011-2020) which seeks to overcome the seven main problems: i) the absence of lifelong learning policy in full, ii) the lack of monitoring of lifelong learning programs at the national level, iii) poor awareness and participation in lifelong learning programs, iv) inadequate financial support for lifelong learners, v) inadequate mechanisms and infrastructure for implementation of lifelong learning program, vi) the overlapping activities of lifelong learning and vii) recognition (KPT 2011). It also supported the generalization phase that allows trainees to do the skills in other contexts either in industry or in practice (Hansman, 2002).

6. Future Research

Further research could also involve more public skills training institute for broader perspective and greater. This will provide a more in-depth input from a different angle. Exploration can be done in terms of gender, socio-economic status, family background, parental education to see parents supporting susceptibility factor choose ITI institutes and other public skills.

7. Conclusions

Basic social process that occurs, will gives us a broad view about the concepts that contribute to the formation of an apprenticeship model using the grounded theory method. Basic social process that occurs is to provide information to us that the processes of formation of skills for the job look a certain phase.

The five phases shows us clearly that the initial selection of trainees to training institutions is an important process. It helps us determine the success of the training provided to trainees. If the apprenticeship trainees are not interested in what follows, it will affect the overall learning system.

Acknowledgements

I would like to thank my university (Sultan Idris Education University, Malaysia) who are giving a scholarship to pursue my PhD studies.

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Cultural processes, social change and new horizons in education

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Abstract

The current high level cultural research and education should explore knowledge production beyond institutionally validated contexts and take into account the impact of produced knowledge and its usability in social contexts. In order to attend this rising need, the Universidad de las Américas, Puebla, Mexico, offers a trans-disciplinary Ph.D. program in Creation and Culture Theories with a participation of researchers from social sciences to arts and humanities with innovative pedagogical strategy where students' research work is inserted in an Institutional Research Project, with a regular scaffolding by an Institutional Group of Researchers.

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Peer-review under responsibility of the Sakarya University.

Keywords: postgraduate education; knowledge production; social contexts; non-textual knowledge; usability of knowledges.

Introduction

It has been supposed that the context of the contemporary information society and the expansion of the digital technology and webs of social media would detonate a critical analysis of the character of knowledge and a democratization of the knowledge production making possible the use of non-textual languages in the processes of creation and transmission of knowledge beyond the usual quality of research supported by academic standards. In the case of artistic and cultural high level research and education the situation is complicated, beginning with how we should understand the current 'social contexts of knowledge' and 'usability of knowledges', their impact in the contemporary societies and how they should be inserted in the institutionalized systems such as universities. In order to attend this rising need of research of alternative creative practices in communities of emerging economies such as Mexico, the Universidad de las Américas, Puebla, Mexico, has offered since 2006 a trans-disciplinary Ph.D. program in Creation and Culture Theories with a participation of researchers from a wide range of disciplines from social sciences and economy to arts, architecture and urban studies. Unusual pedagogical approach through a tutorial system that provides scaffolding by faculty together with a whole group of associated researchers and fellow students, detonate a high level, trans-disciplinary research in order to detect, explore and potentiate alternative knowledges as vehicles to lead to a social change and to a socio-culturally sustainable development, as detonators of cultural practices and knowledge production beyond the Occidental canon.

In the academic world, the intellectual authority is accrued through the quality of research validated by common practices and institutionalized systems, such as academic conferences, refereed journals and publications, etc. that permit a reflexive and critical debate. Further on this debate, as the results of the research work, should impact broader social contexts and provide concrete indicators of the usability of the knowledges produced. In the ideal case, the external indicators match the consensus reached during the critical disciplinary debate (Biggs, 2006). In the case of research and education in humanities the situation is quite different and

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complicated, beginning with the fact, how we should define ‘impacting broader social contexts’ and ‘usability of knowledges’; humanities and other disciplines related to creative processes with non-rational approaches to the knowledge production are changing the main concept of knowledge itself. Exploring different experiences of alternative knowledge production, our students and researchers have focused their studies on multiple creative practices linked to spatial interventions, performances and material and immaterial artwork produced by local communities or through a cooperation between them and artists; we have studied everything from graffiti, temporal shelters of poor people made of cardboard, popular carnivals with their performativities appropriating of public spaces, urban murals and street art, theatre of the oppressed, etc., describing the social reality and means of survival of people living in peripheries of the great metropolis of emerging economies as Mexico. In this sense, not only a researcher, innovator, creator or qualified experimenter occupies the role of an ‘expert’, but also the common people interacting with her or him. Or sometimes it is the common people alone that leads the knowledge production and transmission processes and the disciplinary professional only is there to gather and research the alternative knowledges produced. The cooperation between researchers, creators and communities, or the research of alternative, non-textual knowledges require of a special kind of creativity and sensibility in order to be able to capture the special meanings of individual and collective manifestations as these go beyond whichever accustomed canonical or cultural rule as constructs of everyday life and as local understandings of the world and its socio-cultural relations and meanings.

On the other hand, migratory movements from Latin America to the United States and Canada create interesting transcultural situations where original cultural meanings, expressions and identities are transported to new territories and reformulated by the local culture, as in the case of the ‘chicano’ culture. The new, hybrid, socio-cultural messages are transmitted back to the homeland to the family in the place of origin, again detonating cultural and social transformations. The socio-cultural to-and-fro goes ever on and as well as these hybrid knowledges transmitted through them, thanks to the digital and social media; the digitalized culture and communication is currently transforming local and migrant identities, the social structure of their communities and the way of life, and the character of popular culture and art.

Not only visual and material expressions are important in the knowledge production, we must not forget auditory messages and especially music. Some of the research work is focused on the politics of the construction of the national identity and patriotic feeling in Mexico during the first decades of its independence in the beginning of the XIX century through music and especially on the strategy of where and by whom these pieces of music were performed and to whom. The interesting fact here is to observe, how the main musical pieces were composed by foreigners and can easily be linked to European commercial and political interests in Mexico. And last but not least, we should not forget the research work focused on the textual work, literature, poetry and journalism, as knowledge production and transmission and as a vehicle for the construction of peace, patriotism, provincial postcolonial Latin American identity and as a geopolitical project.

Trans-disciplinary investigation, emergent economies and education for development

One of the characteristics of the new Ph.D. programs in humanities in general is that they tend to widen the Eurocentric shallow sense of history, seeking for would-be innovations and knowledges sprung from the unseen roots forgotten by the historical amnesia of the Western universities (Elkins, 2014). Some regions have been particularly affected by the hegemony of European colonial and political power and by the domination of its cultural and scientific knowledge. The response to that has been the rise of strategies of epistemic disobedience; colonial axis of power-knowledge-culture-art, which had reduced entire people to objects of study, and to those of domination and representation, had now to be urgently re-discovered and re-valued by themselves by social struggle and revolt and by epistemological and aesthetic innovation. As a consequence, the challenge for the Ph.D. programs is to find a route to respond to these necessities of construction of alternative modes of knowledge production. It is important to notice here, that the terrain of knowledge production is shared with many parallel universes, each of them with their own language and thus, the research must be open enough to understand a great diversity of messages (Steyerl, 2010). Thus, new hybrid, sensuous and critically reflective cultural forms demand new, innovative research initiatives that challenge the current stiff university system demanding substantial changes in the traditional role of research and education in humanities; for example Belonging Bologna-seminar report (2010) emphasizes that art, design and culture education and research should always be connected to and reflecting the events of the outside world.

Taking into account the above mentioned observations, the Ph.D. program in Creation and Culture Theories distinguishes as one of the most notable features of the recent years, the incredible whirl of social, political,

scientific and artistic events in the whole world and the fact that the velocity of these events has exceeded our capacity to elaborate responsible theoretic reflection, to understand their origin and causes and their impact and future consequences in societies. Thus, the analysis of cultural production has been exceeded by modes of action, thinking and feeling not known before; the wideness and velocity of the cybernetic web, the scope of technology of mass media and the human environment manipulated by commercial strategies and the recent collapse of paradigms that until today had given form to the individual and to the collective creativity and innovation, demands for a formation of researchers and creators who are able to respond and give consistence to our time proposing spaces for cultural dialogue and critique (Fundación Universidad de las Américas, Puebla, (UDLAP), 2014) and forms of creative knowledge production and transmission.

From our point of view, the Ph.D. education in humanities should be based on reflexive and critical study of knowledge production considering cultural theory and different creative practices. The research work should be based on the following main purposes: making evident the value of a vast and divergent range of creative practices for the alternative knowledge production, the role of globalized cultural industries in the local socio-cultural identities and structures and their impact in the sustainable development of emerging economies, and capture and take advantage of ever changing social knowledges stimulated by the digital media and social webs that construct and transform socio-cultural realities. Thus, trans-disciplinary research and postgraduate education produces researchers, creators, teachers and socio-cultural promoters dedicated to the study of how the globalization, technology and cultural processes define the knowledge production processes as well as the character of our postmodern knowledge and of the institutions and institutional connections and webs that manipulate and operate that knowledge. Considering the Mexican context as that of an emerging economy, we also emphasize its current problematic related to that of the subaltern 'Others', to hybrid cultures and globalization, to conflicts between socio-cultural centers and peripheries and to the construction of cultural knowledge in them. This kind of research work leads us to analyze changes in the creative processes and strategies of innovation and transformations in the knowledge production and its impact in the social, political and cultural field and explore the evolution of contemporary identities related to the institutional and non-institution construction of public and private spaces in postmodern societies (Fundación Universidad de las Américas, Puebla, (UDLAP), 2006).

Institutional research project as an educational framework

As mentioned before, the trans-disciplinary Ph.D. program in Creation and Culture Theories explores the alternative and local knowledges as vehicles leading to a social change and to a socio-culturally sustainable development. The Ph.D. program has been accompanied from its beginning by a trans-disciplinary Institutional Research Project of a group of researchers and creators dedicated to produce new knowledge on the postcolonial and postmodern socio-cultural basis aimed to nurture the postgraduate program and offering students high level academic scaffolding through debate sessions, conferences and research project presentations. The Institutional Research Project itself, to which the dissertation work of each student is inserted and through which it is constantly monitored, is an innovative pedagogic mechanism through which students are involved to active research work and guided by an academic tutor and thus effectively introduced to research methodologies and theories straight from the beginning.

The Institutional Research Project itself, as a global framework to the Ph.D. research work, is focused on new cultural forms and knowledge production understood as those related to the digital media and social webs, as well as production and transmission of non-textual and alternative modes of knowledge. To begin with, when the evolution of modern epistemology needed the text (the book), a series of practices (writing and reading) and institutions such as libraries and universities as its paradigmatic support, new modes of knowledge demand now drastic changes done in the material conditions of knowledge production and transmission. The Institutional Research Project entitled 'Epistemology Beyond the Text. Cultural Practices in the Information Era', seeks for manifestations of new cultural practices in the institutions of knowledge production, explores alternative knowledges and cultural practices outside any institutional framework and revises the location of the already known ones in order to analyze them in the context of the informational societies (López Cuenca, 2011).

The real knowledge is not any more produced or transmitted only through text. To begin with, other means of communication permit now the transmission of information as well as the production of new, local, collective or even individual knowledges or manipulation and free reformulation of this information. The result has been a different conception of the world as well changes in the subjective experience. The Institutional Research Project consists of two fields of research, 'Expanded Scriptures' and 'Subaltern Knowledge', with two case studies each.

'Expanded Scriptures' re-interprets the role of the text in the information society in order to respond to the paradigmatic changes and to the legitimated referents by the academia. It also seeks to recognize non-epistemological knowledge production located outside the universities, such as social media and Internet, multimedia art production or knowledges of digital communities, obliging us to redefine the epistemological frameworks that organize, legitimize and distribute knowledge. 'Expanded Scriptures' is focalized on the collective production and access to academic knowledge through multimedia and on non-textual curatorial strategies and multimedia interventions in public spaces in Mexico since 1988. 'Subaltern Knowledge' on the other hand, analyses critically the consequences of rethinking the text as an epistemological paradigm of knowledge production using as a basis the study of digital technology and/or peripheral communities. In this case, textual production of knowledge is challenged by other cultural practices and forms of codification. In the case of digital media, Internet makes possible the creation of sites (webs, communities) for knowledge production where persons from different geographical locations and cultural contexts make community due to their common particular interests. These spaces of knowledge production are not necessarily regulated by formal institutions or organizations, on the contrary, they frequently defy them producing subaltern knowledge. 'Subaltern Knowledge' studies also Mexican urban peripheries and their realities through their popular urban non-textual narratives captured in their streetscapes, soundscapes and street art that challenge the institutional urban form and order and the canonical aesthetic (López Cuenca, 2011).

Ph.D. dissertation projects inserted in the research framework

Since 2008, there are several doctoral dissertation projects inserted in the conceptual framework of 'Epistemology Beyond the Text'; some of them already concluded and a good number of them in process. The following research work inserts in the area of 'Expanded Scriptures'. One of the already completed Ph.D. dissertations, called 'Creative Industries in Mexico. Economic Expansion of Creativity: Case Study of Batallón 52/Kaxán Media Group' (Posada Ávila, 2013), focuses on the growing interest on the economic growth detonated by creative industries in Mexico. This investigation is based on the classic theories of creativity, such as Guilford (1986 and 1987), Brown (1989) and Csikszentmihalyi (1997), about creative industries such as Robinson (2001) and Florida (2004) as well as on the Schumpeterian theories about economic cycles, innovation and creative cycles (Schumpeter, 1961, 1964 and 1976), in order to propose schemes and models that could be applied in Mexican context to detonate sustainable socio-economic development. The case study used as the starting point of this research project points out the importance of non-governmental initiatives as detonators of sustainable creative industries in Mexico, but also the necessity of development of creative strategies in order to take advantage of authentically local cultural features in the creation of successful design and multimedia products.

'Which Reality? Interactions at the Southern Border of Mexico, as a Projection of an Artistic Creation Practice' (Quíroga, 2012) is another concluded Ph. D. dissertation. This research project is aimed to be at the same time a creation process and an analysis of an artistic practice as a vehicle for generating and understanding knowledge (Maffesoli, 1997) based on the diversity of cultural and social manifestations along the southern border of Mexico, where the border line not only marks a geopolitical limit between two nation-states (Mexico and Guatemala), but also emphasizes their differences and all they have in common through a palpable repertoires of mobility of people, things and events (Negri and Coco, 2006). The research involves a series of interventions in Site, such as public sculpture, art installations, driven participative actions and photo and video, as a result of the human interaction between both sides of the border line. Finally, the art intervention is exposed through multimedia and non-textual curatorial strategies through Internet to be an open access cultural product, available in <http://www.cualrealidad.org>.

The Ph.D. dissertation in process entitled 'Mexican Digital Diaspora: Transnationalism, ICT and Social Networks in North America' (Mesa Rodríguez, 2014), explores new perspectives and paradigms about transnationalism within the Mexican migration context. Taking into account transnationalism that consists of those processes forged by migrants through which they maintain simultaneous and complex social relations between their locations of origin and their current place of living (Schiller, Basch, and Szanton Blanc, 2009), the project explores the migrant users' performativity in Internet and particularly the increasing use of Social Networks (like Facebook or Twitter). Based on interviews and on-line surveys administered to Mexican migrants located in United States and Canada, the research analyzes the complexity of digital transnationalism, precisely the transformation of social networks to Social Networks. That is to say, how the day-to-day communication between migrants and their families could lead them to share immaterial linkages and reinforce trans-local identities, as well as potentially organize and mobilize them transnationally through the Web 2.0 (second era of

social communication in Internet). The project also inquires the transnational limitations, not only of digital illiteracy and the scarce infrastructure that affect the use of ICT by migrants and their families, but also of the closed and commercially orientated performative environments offered by current Social Networks.

Inserted in the second area of studies titled 'Subaltern Knowledge' we can find following kind of research work: Theatre of the Oppressed (TO) of Augusto Boal (2006), was the main methodology applied in the completed Ph.D. dissertation – 'The Theatre of the Oppressed: An Aesthetic Practice Where the Subject Becomes Visible' (Fernández, 2010) - to explore through theatre and in creative ways some daily expressions of patriarchy, homo/lesbophobia, employment discrimination and even power relations existing in prison between internals beyond the control of the wards. And it was precisely because of these experiences and their contradictions why TO may have a greater effect of transformation in individuals. Rather than great transformations, this theatrical space achieved small but very meaningful changes in the subjectivity of individuals, beginning with abolishing the passive role of an observer transforming her/him to an active agent on the scene, presuming this as a preamble to a real action.

In also completed Ph.D. dissertation 'Porous Frontiers: Re-imagining Trends of Musicological Analysis in the Work of Alfred Schnittke' (Ismael Simental, 2010), the author explores strategies to achieve the leading role in the technological, social and intellectual vanguard in modern art in which the originality, technical progress, creative innovation, systematization and intellectual complexity were the maximum values, in the context of Cold War Soviet Union, where whichever vanguard art was considered aristocratic, discrimination against the proletariat, political debauchery and symbol of capitalist ideology and thus. The work of soviet composer Alfred Schnittke, coincides with this hostile period, characterized by a special attitude of the socialist state towards art, according to which this had to support the functional interests of the state deriving in an intellectual repression. The analysis of the creative processes of Schnittke and of his compositions emerges from the reflections about expressions, psychological states and about music postulated in *Essay on the Immediate Data of Consciousness* of Henri Bergson (1910).

'Literary Betting in Columbian Caribbean in the Work of Luis Carlos López, Jorge Artel and Oscar Delgado. Poetry and Journalism in Counterpoint with the National Provincialism' (Rodríguez González, 2012) is a concluded Ph.D. dissertation in which the author studies how a provincial community of literates, whose arguments have had a decisive influence in the interpretations of the nation-state, different from those of the colonial legacies of Cartagena de Indias and of the colonial understanding of the country of Columbia, has influenced local writers for generations during the XX century. In the cultural context of America, constant conflicts are produced between the modern, Occidental logos and the 'colonized' geographies, territories and people, the dispute that coexists or it extends till the post-colony and makes itself visible in the Caribbean literature through the transgressive thinking, and a cultural diaspora that exceeds the concept of territory marked by the power of the imperial languages.

'Complexity, Trans-disciplinarity and Project: Approaches and Strategies for the XXI Century Design' (Moreno Toledano, 2014) is a Ph.D. dissertation project in process which uses as its starting point the theory of Morin (1990, 2004) as well as the contemporary Latin American identities related to local cultures, consumerism, globalization and different fields of design (Margolin, 2005, Sparke, 2004). A special focus of this research is on the potential of trans-disciplinary design practices (Simon, 2006) as part of the solution for complex socio-cultural realities of Latin American cities and their problematic of urban identity, insecurity and poverty. The final goal of this project is to find trans-disciplinary design strategies through which public spaces could be integrally intervened in order to be able to produce socio-culturally, economically and politically sensible and sustainable solutions where the public space (González, 2007) could be the mediating piece between common people and governmental institutions.

Also 'Behind the Walls: Democracy, Political and Cultural Management in Mexico and Ecuador 2007-2013' (López, 2014) is a nearly concluded Ph.D. dissertation project which explores cultural management, democratization, cultural policy and cultural democracy (Mouffe, 2007) as concepts that shape practices of street art and graffiti as non-hegemonic experiences in institutional spaces. Author suggests that both street art and graffiti should be considered beyond their traditional location as part of youth culture and their relation with gangs and urban criminality. Thus, the research work aims at exploring the links between culture, democracy and implementation of cultural politics and how these could be converted to normalizing instruments of productive cultural practices

Conclusions

And I say the ‘humanities,’ and not just ‘the humanists’ [...] Since all the knowledge and understanding is human understanding (from genomics to dance, from electric engineering to literature, from mathematical models in economy to political economy), every scholar, academic, and scientist has a responsibility toward the humanities; in other words, he or she has critical, ethical, and political responsibilities in the production, dissemination, transformation, and enactment of knowledge. The humanities can no longer afford to be what they have been for the past sixty years: a ‘complement’ to the ‘efficiency’ of ‘serious’ technological knowledge that guarantees a constant progress of humanity as a whole and a sublime ‘enrichment’ of human beings as Human Being (Mignolo, 2003).

Walter Mignolo points rightly out the changed role of humanities in the contemporary university education and research; especially in emergent economies of the previously colonized territories is important to recognize the widened potential of humanities to produce contemporary knowledges beyond the traditional knowledge producing institutions and epistemology. Countries like Mexico, with an ever strengthening intention to have a much more visible participation in the world politics, economy and culture, need to detonate a social change in order to resolve their great socio-economic, cultural and ethnic inequalities. In this task, all the local creative, cultural, historical and human resources should be taken advantage of by the educational systems and research organizations and projects. As we have shown, new kind of research projects in humanities can go beyond their accustomed limits, having as a goal to impact local economies through knowledge production in digital media and technology in order to create solutions with quite a local cultural seal, or to construct strategic models to transform social realities in conflictive regions through locally recognizable knowledges, means of transmission, languages and meanings (textual or non-textual) in order to reformulate local socio-cultural identities transforming them to detonators of a social change through sustainable cultural processes.

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Cultural sociology: a new approach to the study of the history of education

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Abstract

This paper examines the possibility of applying the principles of cultural sociology to the study of the history of education and training. Although research into the development of education and training in the recent decades has been quite sociological in character, most sociological concepts used in such studies do not adequately address the issue of culture. Existing studies are mostly based on utilitarian and materialistically oriented approaches. This is why we believe it is necessary to develop more culturally-oriented perspective that would offer appropriate analytical tools to study the cultural dimension of the development of education and training. In our opinion, the cultural sociology of J. C. Alexander with its concepts of cultural codes, narratives and metanarratives offers precisely this perspective. It is precisely these tools that we apply to four problems in the historical study of education and training.

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Peer-review under responsibility of the Sakarya University.

Keywords: History of education and training, cultural sociology, J. C. Alexander, cultural codes and narratives

Appendix B. Introduction

Although the term culture appears frequently in educational research (Kaiser, 2005; Roberts, 1982) and the so-called "cultural turn" (Bonell & Hunt, 1999) has attracted much attention of social theory (Alexander & Smith, 2002; Brown, 1990, 1992, Clark, 2004; Sewell, 1992, 1999), the study of the historical dimension of education and training as yet has avoided applying an analytically anchored concept of culture. Therefore, the object of our study is to examine the possibility of using contemporary cultural sociology in the study of the history of education and training. In this regard, we intend to first highlight the main shortcomings of current social science approaches to the study of the development of educational systems and educational institutions. We will then focus on how these shortcomings can be overcome by using cultural theory, already formulated by the American "neo-Durkheimian" school (Alexander, 1988, 1989). We are convinced that the "real" cultural theory, which would clearly accentuate the role of culture as a significant causal factor of educational phenomena, has not yet been sufficiently developed the case in the historical study of education and training.

Like Anne Kane (2000, p 311, cf. also Geertz, 2000), we see culture as a symbolic system containing within itself the meanings through which people understand their experience of the world and on the basis of which they subsequently act. It is a constitutive structure of semantic disposition, which has a causal power in influencing historical events and processes. At the same time, culture operates especially through narratives which influence the values and attitudes of actors and through them the formation of individual and group identities (Somers, 1992; Steinmetz, 1992).¹²⁹ This is why Kenneth Burke (1973, cf. Swidler, 1986) can venture to say that culture is "equipment for living", without which we are entirely helpless.

Normally, it is believed that education and training produces *culture* in the form of the values and attitudes of pupils and students, just as it shapes their cultural identity, and this occurs in both children (Alexander, van Wyk, Moreeng, 2014) and adults (Mezirow, 2000). Thanks to this, pupils and students take away from schools and other educational institutions beliefs about what is right and what is not or what their role in society is, as well as what they should and should not do. On this point, advocates of critical pedagogy emphasizes that

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¹²⁹ For the purpose of this study, narratives are understood to be stories that consist of a specific configuration of characters and events connected by a storyline. Thus conceived, narratives contain in themselves the symbolic significance of specific cultural codes which lead to an understanding of events and actors. We can then add that it is through "storytelling" that meaning is publicly shared, and thanks to which individuals can be seduced by arguments and modify their meaning (Kane, 2000, p. 314).

through the activities of schools pupils and students become merely depersonalized components in the enormous machine of Western capitalism (Freire, 2000) or obedient self-managing workers and citizens in the neo-liberal political regime (Coffield, 1999).

However, this does not exhaust the role of culture, since in just as an intense way culture constitutes the area of education and training. People take on different positions and opinions about education and training. Through these activities, they then produce a collectively shared identity for educational institutions. The influence of culture thus clearly affects the way in which educational institutions operate: Why are some of them considered prestigious, while others are second class? Why are some measures in educational curricula deemed necessary, while others are widely rejected? Culture, therefore, is an important factor that shapes the education and training according to its own individual logic.

In order to better understand the role culture has through such a non-reductive and analytical approach and to understand how cultural theory differs from other types of explanation, it is necessary to place the issue in the debate on the general theoretical background of social sciences. According to James Mahoney (2004) each general theory presumes the existence of postulates about the basics of causes and causal sequences of social phenomena. This kind of theory is, according to him connected with certain ontic signs - especially those that result in causality between social phenomena - and aims to present the "final cause" of social phenomena, i.e. the most immediate causal mechanism.

All general theories according to Mahoney (2004, pp. 460-461) consist of two major elements. The first is the so-called "*causal agents*", which the author uses to mean the basic unit of analysis (i.e. what is studied), while others are so-called "*causal mechanisms*"¹³⁰, these represent the properties of causal agents producing causal effect - i.e. causality and other forms of connections (dependencies) in relation to the causal agents.

The function of general theories is that they allow one to bypass the so-called "black-box problem." If there is no pre-determined means of connecting causes and effects in terms of determining the causal agents and mechanisms, it is very difficult to explain why there is some particular type of outcome or effect. It then especially not possible to know what independent variable/variables are actually at work at a particular point; in other words, we do not know where the roots of causality lie. Without the existence of some general conception of causal linkages, therefore we cannot meaningfully associate a cause with its consequences. This problem is solved precisely by general theories that allow black boxes to be filled (or at least make them more transparent) and thus make a selection of probable operating variables, and in the case of any empirical association between them to confirm what kind of causal connection there is (Mahoney, 2004, pp. 464-465).¹³¹

According to Mahoney (2004) there are five general theories:

- (1) *Functionalist theory*, the basic unit of analysis (the causative agent) is the social system and the causal mechanism for functional needs/requirements of the social system. Each phenomenon is then explained by the function it fills in relation to the whole. For example, what is the role of technical schools/lyceums in society?
- (2) *Rational choice theory*, in which the typical default unit of research is the individual or group actor, and the causal mechanism is the instrumental rationality of individuals or organizations. This type of theory focuses on rational strategies that actors and organizations choose in relation to their objectives and the context in which they are rooted. Such as, what educational path pupils rationally chosen in relation to the possibilities offered by a school system or level of schooling offers.
- (3) *Power theory* is, by contrast, a kind of general theory, which has a causal agent in the form of a so-called collective actor, usually in the form of a social organization or otherwise coordinated social groups - e.g. class. The role of the causal mechanism in this case is played by resources for which collective actors

¹³⁰ A causal mechanism in contemporary sociology means something other than causal sequence. Mechanisms are not the same as laws (Hedström & Swedberg 1998 Hedström, 2005, 2009), because they are not a simple combination of two variables (dependent and independent). Mechanisms by contrast, represent a plausible description of the relationship between the two phenomena which interact with one another - i.e. between explanans and explanandum. It is a more or less a detailed description of the action of one condition on another, within which are always accentuated the terms of their relationship, as well as their previous relations and retroactivity. Authors incline to this because what at one moment may represent the "effect" can be the "cause" at the next moment. Determining the causal mechanism is therefore necessary for an explanation of a phenomenon to be credible. A relatively simple and useful definition is offered by Poe Yu-Zu Wan (2011, p. 1557), who states that the mechanism is a collection of processes that occur within the particular system (and often also between systems), in which they arise (or in which their formation is blocked) are transformed or reproduce the structure of the system. We can add that the very concept of mechanism often refers to the metaphor of "machines" (Gorski, 2009), which is, however, flawed. The mechanisms should be seen as a dynamic link to another entity that is constantly changing, and their interactions, including that of its outcome, is at least uncertain.

¹³¹ The genealogy of the concept of the black box dates back to cybernetics and systems theory in the fifties. Today, authors using this concept are trying to resolve one of the fundamental epistemological issues of social science - how best to approach the investigation of complex social phenomena (Karger, 2012). Most sociologists (see, e.g. Hedström & Swedberg, 1998, p 9) work with the concept of black boxes in a very similar vein as James Mahoney; i.e. at first they treat the object of their investigation (the phenomenon that want to explain) as a "black box" which they subsequently seek to make transparent. To achieve this, they set among the inputs and outputs of the black box a mechanism or ontic model that explains the means by which these particular phenomena operate on one another. Thanks to the use of the proposed approach it is possible to take advantage of dispose some perceptual schemas for examining social phenomena (black boxes) as well as "building blocks" for their explanation.

strive and which at the same time allow them to act. Sources of power, whether one regards these to be the ownership of the means of production (Marx, 1973), authority (Dahrendorf, 1969) or different types of capital (Bourdieu, 1998), moreover also determine an actor's position in the structure of social relationships.

- (4) *Neo-Darwinian theory* identifies genes as the unit of analysis and the causal mechanism to be contribution of genes to the so-called "fitness of the organism." In their actions, humans are *de facto* controlled by their genetic code, which models their behavior so that the organism achieves greater fitness in subsequent generations. Sociobiological theories most often rely on this explanatory mechanism (see, e.g., Wilson, 1993).
- (5) *Cultural theory* uses semiotic practice as an explanatory mechanism, these affect the default unit of analysis in the form of a particular community, most often culturally related groups. This semiotic practice is then understood as the system of meanings that are shared by a particular community - whether it be material or an immaterial symbol, such as various forms of discourse. The creation and reproduction of these meanings then act as a macro/meso social factor in the behavior of the actors in this community. Cultural theory moreover differs from the previous general theories in that it is idealistic (Schudson, 1989) and not materialistic.

Each of these approaches therefore grasps social reality in a completely different way, thanks to which they are able to reveal some of its parts. Together with Paul Feyerabend (2001) we can say that they are all general theories and equal in their foundation, because it is not possible to say *a priori* that one of these cognitive conceptions is more valuable than another.

Appendix C. Previous research: the use of general theories in the history of research on education and training

The sociological approach which has been increasingly used since the 1980s in researching the history of education and training has been characterized by the fact that it has emphasized the role of certain general theories to explain the development of educational phenomena. Thanks to this it has been possible to overcome the one-sided, purely historical approach, focusing in particular on: (1) the development of the pedagogical systems; (2) the stories of the great figures and reformers in pedagogical thinking; (3) or about some aspect of the transformation of the education system and curriculum. In this conception, the development of education is often reduced to changes in the number of students or to a list of the sequence of educational plans and policies. However, when social factors were used, mostly this did not serve to explain the changes in education and training and the structures thereof, but merely for their partial contextualization.¹³² The result was, therefore, that social factors were used only as a "label" or "backdrop", not as a consistently developed explanatory mechanisms, which Peter Hedström and Richard Swedberg (1998) considered the greatest sin of any social analysis.

In contrast to such a position, the sociological approach contributes an emphasis precisely on general theory, which works with a variety of explicitly defined causal mechanisms and agents. In the study of education and training up to now primarily two of these approaches have been used: (1) power theory and (2) rational choice theory. Power theory in this case emphasizes the fact that the development of education and training is primarily conditioned by power conflicts that most often take the form of either a struggle between social classes or ethnic conflicts. Works in this field describe how various ethnic groups within the territory of a state promote the establishment of their language as the only language permissible for instruction, aiming to maintain their linguistic superiority or to reverse a situation in which their language is socially disadvantaged (see e.g. Hroch, 1999). Another variant using this type of theory consists of studies (Bourdieu, 1988) which show how the upper class tries to prevent access to some elite educational institutions, aiming to maintain their own dominance. In a second category, power theory can focus on the explanation of how the unequal distribution of resources leads to the construction of different forms of educational institutions - elite and mass, and how this affects the creation and reproduction of social inequality (see, e.g. Ewing, 2005; Macrina, McLaren & Hill 2010; Kelsh, Hill, & Macrina 2010; Too & Livingstone, 1998). Rational choice theory is becoming especially popular in studies of education and training because it clearly captures the formation and functioning of the educational market in which the various schools and the actors move, and how these organizations and individuals in this market try to maximize profits while minimizing losses (see, e.g. Green, 2000). This has emerged as particularly urgent as the progress of modernity has been eroding traditional cultural structures such as religion, and in their place are emerging market structures which demand utilitarian behavior (Callon, 1998).

This conception of research in our opinion is seriously limited in that it emphasizes only material phenomena and not the role of culture, which, as we pointed out above, shapes educational institutions according to its internal logic. We therefore agree with Philip Smith (1991, p. 105), who highlights the need to ask the question

¹³² As an exemplary case of such analyzes compare (Pokorný, 2003; Řezníčková, 2007).

of how culture works in specific, concrete historical situations. The power theory is insufficient to explain the changes and development of educational systems and education, because in power theory the role of culture is reduced to class or other group ideology. This is why it is not able to describe why some class/social groups consider education to be of significant value, while for others it means nothing. Nor does it explain under what conditions the transformation of the educational system or how it operates is considered legitimate. It is cultural experience through various narrative forms that makes it possible to construct a positive or negative meaning for these phenomena, on the basis of which actors then act (Kane, 2000, p. 314). Similarly, rational choice theory greatly overestimates the strength of the market structures and utilitarian behavior. Not every act can be classified as calculating profit, therefore it is necessary to pay attention to how people act motivated by the different meanings they attach to certain educational paths or to education as such. It is also precisely these meanings which allow individuals to form their opinions sufficiently to be able to consider such behavior valuable or not.

3. Cultural sociology

Contemporary cultural sociology seems to offer a suitable theoretical framework for the study of the cultural dimension of the development education and training offers contemporary. Its main exponent Jeffrey Alexander (1998, 2003, 2006, Alexander & Smith, 2002; Alexander & Reed, 2009) and other proponents (see, e.g. Baiocchi, 2006; Connor, 2012; Jacobs, 2000, 2001; Jacobs & Smith, 1997, Ku, 1999, Smith 1991, 2006), are concerned with how events, actors and institutions acquire significance through cultural codes, narrative genres and metanarratives. It is therefore a suitable tool for developing an integrated approach that would serve to explain the structures and changes in educational phenomena on the cultural plane.

The approach of cultural sociology is based on the central argument that culture has relative autonomy (Alexander, 2003), which means that culture is not reducible to other factors (social and economic), nor is it merely an analytical dimension of society. Rather, it is an important semantic structure, and its impact both affects the meanings of social phenomena, and offers a repertoire for the creation of symbolic boundaries between groups, as well as helps to create their identity. For this reason, it stands out as a suitable vehicle to address the cultural dimension socio-historical phenomena.

In terms of analytical tools, cultural sociology offers three types of analyzes that can be used to study the development of education and training. These are:

- (1) *Cultural codes* that represent basic units, e.g. words, terms, phrases, which create meaning (Geertz, 2000; Lakoff & Johnson, 2006; Smith, 1991). According to Alexander (2006, cf. well Somers, 1992) cultural codes work on a binary principle, which categorizes reality based on different meanings - positive and negative, the sacred and the profane. Three types of codes are most frequent. These refer to: (i.) the motives of the actors, (ii.) their mutual relations, and (iii.) institutions. While on the one hand, we encounter codes that indicate positive civic motives (e.g. activity, autonomy, self-control, rationality), positive assessments of relationships (open, trusting, unselfish, friendly and altruistic) and positive assessments of institutions (driven by rules are inclusive, impersonal, operating on the principle of equality). On the other hand, we also encounter cultural codes, which have a negative connotation. In the case of motives, for example, these include passivity, dependency, passion, uncontrollability or hysteria. The opposite of positive social relationships are relationships that are secretive, suspicious, self-centered, selfish and calculating. Institutions are in turn negatively depicted by codes, which denote arbitrariness, a significant focus on the power and an exclusive emphasis on hierarchy (Alexander, 2006, pp. 57-59). We may add, then, that all these codes, although they do not often present social reality in such an explicit form, they polarize statements about events and give them a specific meaning
- (2) *Narrative strategy*. This is the strategy of creating stories that work in different ways within a storyline. This produces a specific constellation of relationships between characters and events that are "causally linked by the plot" (Somers & Gibson, 1994; see also Kane, 2000). This is why Hayden White (2011) is willing to identify narrative strategies as "meta-codes", which carry a single meaning. Frederic Jameson (1981, 1984, 1988) then goes even further when he notes that the narrative strategies are in fact epistemological categories that conceptualize reality and it is not possible to view them from the beginning as a neutral literary forms. Cultural sociology (see, e.g. Alexander & Smith, 1993), in this case mostly based on the conception of Canadian literary theorist Northrop Frye (1971), which divides the narrative strategies according to different genre types: comedy, tragedy, romance and irony. Each of these represents a specific configuration of characters, events and happenings, from which also follows and the resulting importance of social groups, institutions or events (see, e.g. Alexander, 2003, 2012; Jacobs, 1996; Somers, 1992; Steinmetz, 1992). The situation of university students can be depicted as a tragic story, described by a constantly worsening labour market. The development of national education by contrast may be shaped by means of a romantic narrative in which an originally subdominant group fought for and won their right to education, etc. In terms of historical analysis it is then possible to see how different types of narratives about specific events or institutions vary over time, or how different

narratives vie for the dominant role in a society.

- (3) *Metanarratives*. Like Brian Connor (2012, p. 9), we believe it is best to conceptualize metanarratives as extensive and very general narratives that constitute the reference frame for events, actors and institutions. A defense for such a definition can even be found in the works of other authors who deal with metanarratives (Lamont & Thevenot 2000, pp. 8-9; Sewell, 1992). Metanarratives then usually address large social groups, such as nations, and it is typical for them to describe the group as a member around which symbolic boundaries are built. We may add, however, that although metanarratives constitute the basic reference framework, sub-narratives always also contribute to creating such meaning.

4. Cases using the analytical tools of cultural sociology

The concepts and tools of cultural sociology offer a wide variety of applications in the analysis of the historical dimensions of education and learning. In this short study we demonstrate their applicability to four brief examples that point out the great potential of this heuristic approach. We chose these individual cases because of their diversity as well as for the fact that through them it is possible clearly demonstrate how it is possible to work with some of the analytical tools of cultural theory.

The first case is that of the process of the secularization of education, which is typical of many European countries since the 18th century (McLeod, 2000). In this case, culturally-oriented analysis may help to discover what cultural codes the state adopted in justifying the decision to take over responsibility for education from the hands of the Church. From the perspective of comparative analysis, this need not consider the discourse/discourses in only one country, but should also to examine the extent to which these discourses varied among the various European states in the 18th and 19th centuries. Whether the states placed greater emphasis on negative codes that identify the Church as an institution which was outdated, obsolete or particularly exclusive and etc., or on the other hand if they focused on a positive description of the motives of the actors for the transition from a church-controlled to a state-managed school system. Within the context of the legitimization of the transition it is then necessary to take into account what narrative strategies are used to describe it in the different discourses (state, civil or ecclesiastical). The question is if the secularization of education is depicted as a tragic decline of "real education" provided by the tradition-tested Church, or is described as a heroic struggle against an old and fossilized body of which must be transformed for the sake of progress. Last but not least, in the case of this type of analysis it is possible to follow which framework individual codes and narratives are moved into. Whether it is a "modernization narrative" about the transformation of the whole society, "the enlightened narrative," about a society run according to reason or a "national narrative" that emphasizes national, non-religious definition of the population of the state. Within the context of the comparative conception of the study of secularization, the cultural approach then allows us to see how the above-mentioned cultural structures (codes, discourses, narratives) differed in cases where the secularization of schools took place, and in those where the process did not developed or developed to a much lesser extent.

Focusing on social processes, however, does not exhaust the usefulness of cultural theory. It also makes possible a unique perspective on the great figures of pedagogical thinking, in whose works it is possible to reconstruct prevailing cultural codes and narratives. From the perspective of the development of educational theory it is possible to follow how the meanings attributed to the ideas of these theorists have change over time, or rather, how a particular problem, event or process is rendered by a variety of different thinkers.

A third case is the rhetoric surrounding American educational reform. Following the Soviet launch of Sputnik in 1957, resistance to conservative educational reform was identified as equivalent to defeatism in the Cold War, while the single-minded dedication to increasing the proportion of "hard" sciences in the curriculum to the detriment of the humanities was coded by the liberal wing as representing the militarization of society. This metanarrative has continued to the present day even after the fall of communism, with conservative educational reformers condemning the actions of teachers' unions as obstructionist and causing a decline in American power, while the left retorts with complaints about the commodification of education.

The fourth case is that of the Erasmus (*European Community Action Scheme for the Mobility of University Students*) student exchange program. In this case, cultural analysis shows how the metanarrative of European integration as a driving force of post-modern cultural pluralism and economic advantage is contrasted against regressive nationalist, isolationist, and protectionist tendencies leading to disintegration and conflict. The program, along with the EU as such, is depicted as representing a forward-looking, pan European, supranational identity characterized by multiculturalism and respect for diversity against the divisive and intolerant nationalistic tendencies of the European past.

Conclusion

The approach of cultural sociology represents a different type of heuristics, which has not yet been sufficiently exploited in the historical study of education and training. We are convinced that it can be seen as

complementary to other types of theoretical approaches (general theories), which makes it possible to overcome their materialistic or utilitarian orientation. This makes it possible to assume that the development of culturally oriented studies of education and training could bring new insight into the issue, not only in terms of the reinterpretation of some sociopedagogical phenomena, but also in terms of initiating research in new areas of inquiry. Culturally oriented analysis actually makes it possible to deal with even non-standard historical sources (such as newspapers, fiction, etc.) that are not commonly used as a data source for historical investigation of the changes in education and training.

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Acknowledgment

This work was supported by the project New Theoretical Approaches in Historical Sociology (IGA_FF_2014_035) of Palacký University.

Culture managers education: system dynamics model of the coworking design centre

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Abstract

Coworking Centre is a concept of joint use of space by individuals working in related spheres that seek their chance in the labour market as freelancers. The strategy for the development of creative region mentions coworking centres as one of its tools. This article aims to create a business model of the Coworking Design Centre. By simulating a coworking centre model we are increasing knowledge of the culture managers about this type of business. We have introduced teaching business using the system dynamics modelling for students of art disciplines in order to raise the level of economic education, awareness and success in business through the Coworking Design Centre.

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Peer-review under responsibility of the Sakarya University.

Keywords: business model, causal loop diagram, cultural and creative industries, design, freelancers, stock, flow

Introduction

Many towns and regions across Europe ensure sustainable development through investing into cultural and creative industries. Universities play a strategic role in these activities, providing they are ready to support the creation of new business models. One of the innovative business models is a coworking centre, which offers outstanding possibilities in terms of employing graduates from creative subjects. A coworking centre is a real work phenomenon of our time. It is a concept of joint use of space by population with similar work orientation, who look for work in the labour market as freelancers.

Florida (2002) called the group of people who work in cultural and creative industries the creative class. According to him, it includes the people who work as scientists, engineers, designers, architects, or in the spheres of education, art or entertainment. Their mission is innovation: they come up with new ideas and technologies. Florida claims that it is just the concentration of these people that functions as the drive for economy and development of towns and regions. Thus the key aspect for the competitive strength of a region is to attract such a group of people, cultivate them and motivate them for work within the region which makes effort to achieve economic growth. The creative class includes three groups of people: “inspirers”, implementers (creators of cultural and creative products) and promoters (competent to sell the products). The problem of the Czech creative business environment lies in the fact that only the implementers receive education (Gebrian, 2010). The strategic role of the Coworking Design Centre is to support sales of products of cultural and creative industries.

A coworking centre also provides the members of the creative class community with an opportunity to share ideas and a possibility to create. Coworking centres are a suitable space for setting up and preserving spin-off companies that commercialize the intellectual property created at university. A coworking centre aims at business success, but at the same time also has social impact in the form of cultural development and social inclusion (Žáková & Cikánek 2012).

Business in the form of setting up a coworking centre is, however, always accompanied by concerns about its economic prosperity. The sustainability of creative coworking centres depends on many external and internal factors: prosperity of companies participating as members of the coworking community, communication between the members of the coworking community, interest of new customers in participating in the community. In the Czech Republic, the risks of this type of enterprise is higher in medium-sized towns (compared to the capital, Prague), because there is not sufficient potential of economically productive members of creative class. On the other hand, starting business of a coworking centre in a medium-sized region increases the chances for economic development of the region, which in return creates a better position for economic sustainability of this business model.

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This article focuses on educating cultural managers in the sphere of setting and testing these new business models. The aim of the article is to describe the creation a unique new business model for the Coworking Design Centre. Its simulation should lead to increasing the knowledge on the part of culture managers about this type of enterprise. Teaching business with the use of system dynamics modelling has been introduced in the instruction for arts students as the representatives of the creative class with the objective to increase the level of economic education, caution, and success in doing business through a coworking centre.

Theoretical Background

The mission of universities taška focused on educating students in creative industry fields is to prepare students not only in terms of creative and artistic work but also in terms of culture management, so that they are able to employ their talents in commercial or non-profit economic sectors independently and effectively. The efficiency of the individuals involved in the learning process thus depends on interconnecting the subjects that have been taught separately until now. As Forrester states (1968), we need to increase future managers' understanding of mutual relations between separate functions of a company. One of the aims of education in artistic subjects is to improve the economic thinking in students. The effort to interconnect subjects can be seen in both directions also at other universities, for example in technical engineering students, who improve their creative thinking in design courses (Pun, 2012).

Through modelling, students of arts subjects gain knowledge that is needed for doing business, knowledge of company economy, accounting, and overview of using money from grant programmes. Models focus on economy of small and medium-size businesses because the knowledge of economy of this type of businesses is crucial in creative industries – they are most likely to offer placement to creative courses graduates. The latest estimations reveal that cultural and creative industries belong to the most dynamic European sectors and represent up to 4.5% of the total GDP in the European Union and approximately 3.8% of total workforce (Building a Digital Economy, 2010).

Business based on cultural and creative industries has similar economic targets as in other industries but the production is different. In creative industry, authors have authorial relationship to their production, and production of works of art is a high-risk activity. Creative companies sell (through their employees) an idea transformed into a physical product such as a DVD, book, piece of furniture, tool, paper, photograph and others. However, the value of this production does not lie only in the physical form of the product but also in the idea, in its authorial aspect. As Kloudova (2010) states, creating an original idea is not a matter of education or concentration. It is often a matter of good luck and, above all, talent. Nevertheless, even talent needs to be promoted and sold so that it can be further supported and developed. In other words, the talent must „pay off“. That is why, within our education of cultural managers, we offer creative companies' economists and producers a new attitude to doing business with systemic approach and dynamic elements.

Most business plans provide their authors with economic data on the company development over the period of up to one year. Such plans, when used for business in creative fields, are usually limited to the linear development of the revenue, profit and cash flow. A strategic business plan prepared in advance for several years is rather an exception. Modelling with the use of dynamic variables and software designed for this modelling, contains three aspects that most business plans are not able to take account of: non-linear character, delay and influence of feedback. As Šusta (in Neumaierová, 2005) states, managers' decisions are an attempt to solve a complex problem of a company, and the first attempt is rarely successful. Proving the correctness of the mental model with the use of expressing it in a system dynamics model is more accurate, while this model is also more efficient in estimating the impact of managerial decisions on the economic development of the company.

The business plan was prepared for a model coworking centre focused on design. From chapter four on, the text mentions specifically the COWORKING DESIGN CENTRE. Žáková & Cikánek (2012) state, that cultural and creative industries need suitable space with creative atmosphere for cooperation and networking. It is reasonable to support such working environment that enables meeting, innovation and business development. Coworking centres enable sharing of knowledge and experience, they create ad-hod work and project teams, and are most effective for the sphere where freelancers and small businesses prevail. Strategies for the development of a creative region list a coworking centre as one of their tools.

At present, design is considered an important factor in competitive strength (Žáková & Cikánek, 2012). It is one of the significant areas of innovation, because thanks to it more innovative products, services and environment can be created, which better satisfy people's needs, provide more of the aesthetic pleasure and improve the quality of life. Focus on design was also chosen as it is the most complex of all subjects of cultural and creative industries. In the broad sense of the term, design includes audiovisual and animation work, if we use these two subjects in marketing and distribution processes for design products.

Research Methods

The main research method is system dynamics modelling, which enables study of complex feedback systems for the purposes of controlling these systems. In order to enable the use of this method, a set of elements for the creation of the model must be prepared. The set was established on the basis of two additional research methods:

1. Analysis of coworking centres in the Czech Republic
2. Designing of causal loop diagram following the concept of system thinking (Senge, 2007)

Coworking centres in the Czech Republic were analysed with the use of a combination of these research methods: content analysis of case studies on creative centres and creative neighbourhoods (Marková, Slach & Hečková, 2013), and research in coworking centres in the Czech Republic. This qualitative research in coworking centres carried out by the authors of this paper was carried out through in-depth interviews with businesspeople, who are founders of coworking centres and were willing to share their experience with the research team. The interviews were carried out in eight coworking centres, three in Prague, the capital of the Czech Republic, one in a bigger regional town and four in smaller towns around the Czech Republic.

The elements of the studied system were compiled into a table (Tab. 1) with the help of a detailed analysis of the interviews recordings. The table presents and critically evaluates the main aspects of this type of business. The data found in the research was supplemented on the basis of searches of Czech coworking centres' websites.

1. Causal Loop Diagram

To describe behaviour of any system in a clear, comprehensible way, the best tool to use is a causal loop diagram. It is a graphic tool which enables sufficient generalization of the data discovered on the studied phenomenon. Causal relations between the variables in the loop diagram are shown with arrows. An arrow with the plus symbol (+) is positive and means that the change in the previous element has the same tendency (to increase or decrease) at the following element. An arrow with the minus symbol (-) is negative and means that the change of the element in the model will result in an opposite tendency (to increase or decrease) for the following element. For instance, the relation between the elements „costs“ and „profit“ is negative, but the relations between the elements „orders“, „revenues“ and „profit“ are positive.

A model of each activity depicted with the use of a causal loop diagram is shown in Fig. 1. A coworking centre is shown in the loop diagram in a simplified way, with the use of the main elements the company consists of: customers, bank account, revenues, costs, profit and staff. This form of a model is simple, relevant and intuitively understandable, yet the picture of the company operations it offers is not too simplistic.

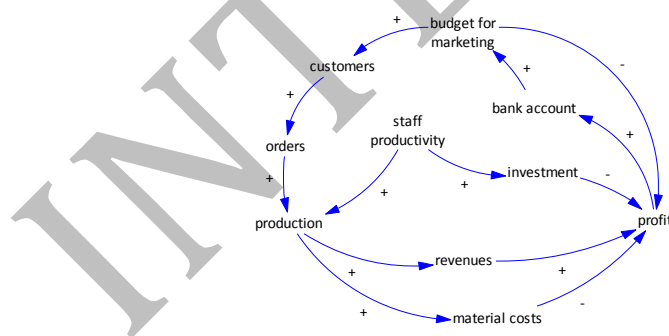


Fig. 1. General feedback loop diagram of the Coworking Design Centre activities

A causal loop diagram (Fig. 1.) is a model illustration of the situation in a company that focuses on services in design or produces design products. As every model, it is a simplification of the reality with the advantages and disadvantages following from the simplification. Even if this model seems closed, it can be extended with further elements and relations. These extension always depend on fulfilling a certain purpose for which the model was designed. The purpose is mostly to find an answer to a question through the simulation of model behaviour. Our problem question is generated by the business environment in which the model is contained: under which conditions will the coworking centre be economically sustainable for a period longer than one year?

2. System Dynamics Model

In order to make the main research method fully understandable, it is necessary to explain several basic principles and graphic symbols (Fig. 2.) System dynamics puts emphasis on stocks and flows, and their relation to the feedback loops. Each element of the system (i.e. in the loop with feedback) is either stock or flow. Stocks are characterized by having memory, that means they do not change immediately. Stocks can only be changed by flows, but it requires certain time. The delay is sometimes very small, other times it can be significant, but it always occurs in the system. Delay is thus a rather tricky feature of systems. It complicates the solution because it separates problems from their manifestation in time.

Flows are manipulated variables, they accumulate and create dynamic behaviour. That means that dynamics is not formed by the feedback loops. It is simply behaviour that is a result of flow accumulation. As Forrester (1992) puts it, only the degree of flow alters the stocks. Decision controls the degree of accumulation of flows. In other words, decision controls all change processes.

In the model there are also additional variables, which include algebraic calculation of any combination of stocks, flows, constants or other additional variables. Constants are exogenous parameters of the model. Additional variables do not have memory, they change immediately, without a delay. They can be the entry into flows but are never an entry into stocks, even though in models they can serve to express the original level of stocks. The symbol of „cloud“ is used to show the borders of the model.

So that the system dynamics model can truthfully capture the problematic behaviour of the system, it must represent the basic structure of the politics of the given system (Šusta in Neumaierová, 2005). The programme Vensim by Ventana Systems (Vensim, 2005) was used to formalize feedback loop diagram (Fig. 2.).

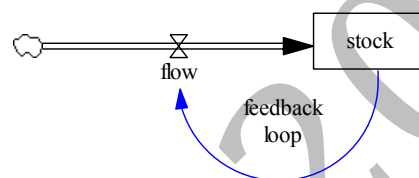


Fig. 2. The symbols used in the model: Stock, Flow, Feedback

The basis of an economic prototype for coworking centre is a model of a smaller company at the beginning of its existence (Schwarz & Schöneborn, 2004). In order to prove the economic prosperity of a company, the stocks used are profit and bank account balance (cash flow). Fig. 3 shows a simplified model of stocks and flows within the company based on a feedback loop diagram (Fig. 1.).

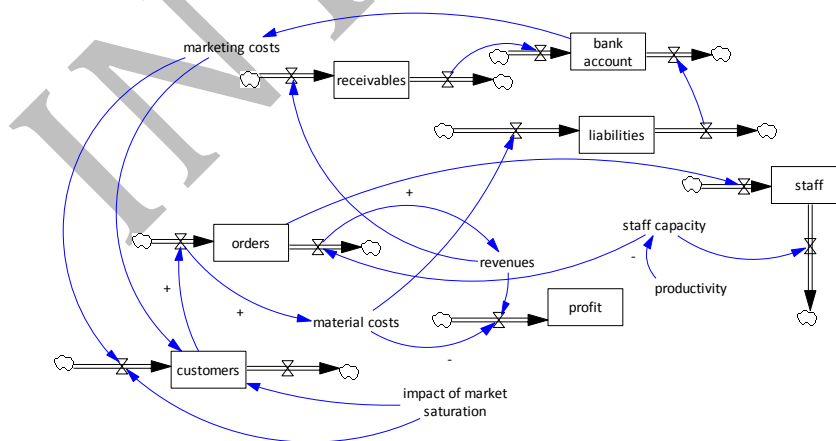


Fig. 3. Model of stocks and flows within one business activity of the Coworking Design Centre

The basic system dynamics model of a company (Fig. 3.) contains all economic operations so that it provides complete data for the balance sheet, profit and loss statement and cash flow review (Yamaguchi, 2004, Šviráková 2012). The model also includes the starting business loan for launching the coworking centre operations. The model enables simulation of revenues, variable costs including personnel expenses, it enables setting fixed costs such as rent. The decision making element for further strategy of investment in the model company is its

payment ability. The model is sufficiently variable, it is possible to change the input parameters, set the variable conditions, assumptions and expectations of the entrepreneur, so that they are able to prepare for the probable economic and payment situation of their company. The data entered into the model enable control of correct results in the company accounting and correctness of the entrepreneur's strategic considerations, decision-making mechanisms and impact of the decisions on the economy of the modelled company.

Outline of the basic model structure

The research into coworking centres in the Czech Republic (Tab. 1) proved that especially in smaller towns entrepreneurs offer only sharing of spaces, but not of other services and activities that are an essential part of a coworking centre. They are motivated by the tendency not to take too big risks and so to maintain good condition of their business. The life-cycle of such a coworking centre is then usually shorter and the centre finishes its business activities within three to five years.

Therefore, two groups of coworking centres were created for the purposes of modelling. The first group (Group 1 in Tab. 1) consists of coworking centres that offer its customers only space rental. Out of eight coworking centres studied, this type of business was done in half the cases, and those were all coworking centres in smaller towns. The other group comprises coworking centres that offer their customers more than one coworking activity (Tab. 1).

By comparing the two approaches through the system dynamics model, we want to show the students that in long-term, it is more convenient to offer more activities in the coworking centre, even if at a higher risk.

Table 1. Structural elements of a coworking centre based on the research results

Structural elements of the business plan (Osterwalder & Pigneur, 2010)	Group 1	Group 2
Mission	None.	Important for the overall orientation of the coworking centre. Thanks to the shared mission, companies with similar work and aims will gather in one area. Mission of new coworking centre members is checked in the initial interview with a membership candidate.
Objective	Profit from rental.	To support beginning entrepreneurs, small companies, to help to create informal networking, encourage cooperation between companies, profit from rental, shop and club operations.
Customers	Entrepreneur looking for cheap spaces to rent.	An independent professional, beginning entrepreneur, creative worker, university graduate, cultural activist.
Turnout	Tenant's payments are fixed, monthly sum; turnout is therefore not of importance for the entrepreneur.	Turnout grows when events are organized in the centre. Therefore, activities that increase turnout are emphasised, even if they are not profitable: educational and social events for members.
Value offers	Space rental for business activities, separated offices, emphasis on quiet workplace for each entrepreneur, copy machine and other equipment in shared spaces, meeting room, kitchen.	Shared space, consultancy, social events, prestige, trust, free offers and services for beginning entrepreneurs, accounting and tax consultancy for coworking centre members, personal communication with centre members with the aim to assess and improve the value offers of the coworking centre, emphasis on contacts, openness to innovations. Diversified offer for various groups of customers. Sufficiently large, functional and comfortable space, self-service refreshment facilities, properly working equipment.
Customer communication	Offer of space rental on the website. Meeting customers' needs according to the price list.	Coworking centre community is formed before the actual physical space, the founding members are motivators. Atmosphere of trust is transferred from the staff onto the customers. Information spreads through a creative website, customer awareness increased through PR releases, service, contact spot for designers and their customers, personal

		relationships, open door days, selection procedures for new members, emphasis on mutual contacts, interactive presentations of coworking centre members. Joint breakfasts and lunches.
Acquiring customers	Advertisements in press, on websites, cooperation with real estate agents, website of the centre.	Members obtained especially on the basis of recommendation from other of former members. Buzz marketing and WOM plays a big role. Community oriented even before the centre operations start. Investment into loss-making activities aimed at widening the community.
Key activities/products	Rental is the main activity, technical equipment of the spaces is ensured, as well as cleaning services, peace and quiet for work, and facilities.	Products: membership with access 24/7, rent according to rooms and equipment, presentation of business experience, informal networking, get-to-know events, courses, shared space, individual space, space for meetings.
Key partnerships	Not required, companies work separately, interaction between tenants does not take place, tenants may attend the events organized by coworking centres but do not consider them beneficial to their business.	Cooperation and interconnection with other coworking centres, achieving bigger variety in coworkers, cooperation with innovation centres supporting beginning entrepreneurs.

With the use of the system dynamics simulation we examined two scenarios for business of a coworking centre type. The first scenario corresponds with Group 1, where the coworking centre offers only space rental. The second scenario represents the principles of business in Group 2, ie. a coworking centre that offers its customer rental plus other services.

The following activities were selected on the basis of the research results for the business plan of the newly prepared COWORKING DESIGN CENTRE:

1. Coworking Bar, linked to the Coworking Club including membership;
2. Coworking Exhibition: exhibitions including previews and informal networking with exhibiting authors, virtual sales gallery;
3. Coworking Shop: purchase and sale of creative products and possibly a share of the Coworking Design Centre in production, creating conditions for a rise of a platform for cooperation between designers and production sphere in terms of prototype development on the basis of industrial and utility models or patents, production of prototypes, prototyping consultancy;
4. Coworking Academy: conferences, lectures, joint events, arts workshops for the members of the Coworking Design Centre, and also for the public to a certain extent – especially at the beginning of the existence of the Coworking Design Centre;
5. Coworking Space – rental of joint spaces, offices, meeting rooms, studios and workshops including equipment, rooms for videoconferences, rental of audiovisual studio.

Each of these business activities is incorporated into the model separately and is interconnected through the connecting variables (customers) to other activities of the Coworking Design Centre. The activities of Coworking Exhibition and Coworking Academy, which are unprofitable, have a positive impact on the numbers of customers of the coworking club and creative shop, thus indirectly influencing the number of potential tenants of the coworking centre spaces. The loss-making quality of these activities is financed with the help of profit-making activities (coworking club in the form of a bar, design shop, space rental).

The following causal feedback loop diagram shows the relations between the activities as they could be defined on the basis of the research results. Understanding of the meaning of this feedback loop (Fig. 4.) in the course of planning and designing the coworking centre spaces is crucial for further research and model design.

Figure 4 below shows the interconnection between the activities of the Coworking Design Centre. The feedback loop diagram (Fig. 4.) is based on the first activity, which the Coworking Club with a bar. The Coworking Design Centre starts its operations with this activity and this activity also brings first customers. The more customers there will be in the Coworking Club, the bigger interest they will have in exhibitions. More exhibitions that the Coworking Club members will participate in will attract bigger interest on the part of the public concerned about culture and design education. People qualified in design will be more interested in buying design products and in sharing spaces and ideas while cooperating in business.

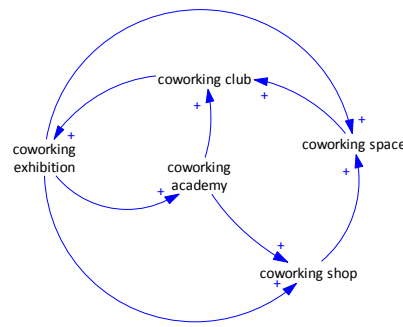


Fig. 4. Customer model for the Coworking Desing Centre with five key activities

Results of the simulation runs

Three graphic illustrations were used to show the results of modelling (Fig. 5., 6., 7.). They include two lines – one represents Group 1, i. e. a coworking centre based only on rental. Group 2 provides a full range of services in five activities, that is a full version of the Coworking Design Centrum company.

For each kind of the Centre's activity the revenues are generated in a different way. In the Coworking Bar, every customer will spend approximately €4, the costs on purchasing goods are approximately €2, there are two employees in the bar, each worth €240 per month. The rent for the space is €120 per month. The loan for setting up the Bar is repaid in monthly instalments of €120. The workload capacity of 1 employee is 400 served customer per month.

The turnout at the Coworking Club for the purposes of modelling: at the beginning of the business, 500 customers of the Coworking Bar per month. Connection between visitors to the Coworking Bar and other activities in the Centre is as follows:

- Every fifth customer is interested in visiting an exhibition,
- Every tenth customer is interested in Coworking Club membership,
- Every hundredth customer is interested in buying a product form the Coworking Shop,
- Every twentieth visitor to the Coworking Exhibition attends the Coworking Academy,
- Every hundredth visitor to Coworking Exhibition is interested in renting space in the Centre through Coworking Space,
- Every hundredth visitor to the Coworking Design Shop is interested in renting space in the Centre through Coworking Space.

The activity of Coworking Space is limited by the space available and its adjustment to customer needs, and the price offer which corresponds with the market demand. The price offer for Coworking Space starts at €120 per month per customer.

One step in the simulation in one month, the results in company development can be shown in the course of six years of the company's life-cycle. The results shown reflect the dynamics of the company growth. The development of the Coworking Design Centre starts with the customer interest, i.e. the business and payment ability of the Coworking Design Centre will run according to the orders from customers.

The following graph (Fig. 5.) shows the development of the profit in Groups 1 and 2. The main variable which causes the profit decrease approximately from the 50th month of the company life-cycle is the impact of market saturation, which must be taken into consideration in every business model. The influence of this element appears in both Groups. The impact of market saturation in Group 2 can be compensated for example by continuously expanding the range of activities offered by the Coworking Design Centre. Thus the profit growth in the Coworking Design Centre at the beginning of business (up to month 13) is lower, but from the long-term point of view it can eliminate the negative impact of the market saturation. In Group 1 this strategy is not possible.

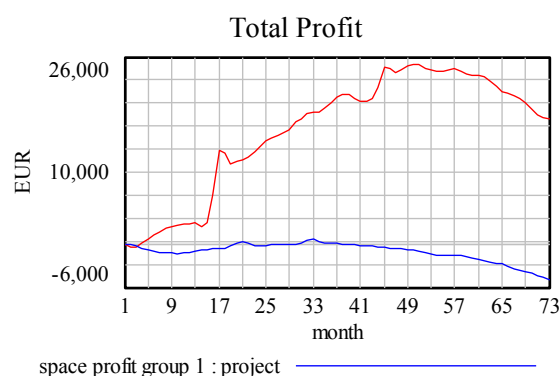


Fig. 5. Profit forecast

An important aspect is the forecast of human resources recruitment (Fig. 6.) which is related to the key activities of the Coworking Design Centre. In Group 1 there is one paid team member in month 1, while in Group 2 there are two paid team members of the Coworking Design Centre in the same period. The development of the number of the Coworking Design Centre stuff depends on the number of customers and staff capacity (how many customers can one employee serve). If the number of the Coworking Design Centre customers is growing, the number of required stuff is growing, too. The principle is the same in both Groups. In Group 1, the demands for staff are lower throughout the Coworking Design Centre lifetime, as the graph shows (Fig. 6.) with the fall in customer numbers, the need to hire new staff is decreasing too. Staff is hired in whole units and its recruitment is delayed two months after the demand for a new team member arises.

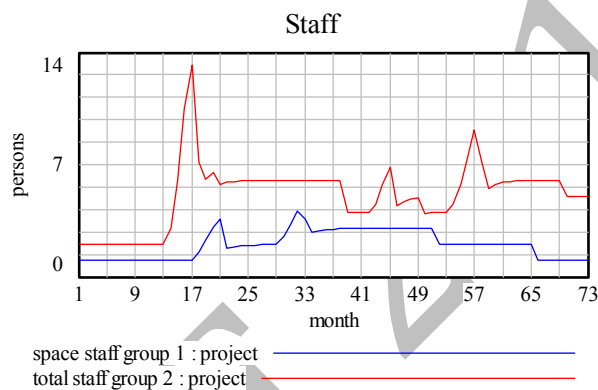


Fig. 6. Forecast of hiring and employing human resources

The last graph (Fig. 7.) shows the situation of financial resources in the bank accounts of Group 1 and Group 2. For this variable, the key elements are debts and liabilities, i.e. revenues and costs, as well as profit. The balance in the bank accounts of both groups is oscillating, while in Group 2 the oscillation is significant. That is caused by a regular monthly income from the debts paid and regular monthly decrease when the liabilities are paid. During the first year of business, debts and liabilities are low, therefore the account balance is stable. In Group 2, the Coworking Shop starts its operation in the tenth month of business, and its customers have a significant influence in the number of customers of the Coworking Space. These two activities start running with a certain time interval, which causes a larger dynamics in business only in the thirteenth month of business. Both activities have the highest turnover and so significantly influence the balance on the bank account. The oscillation is relatively regular since the flow of money into and from the bank account of both groups does not contain any irregularity or change element. In the model, debts and liabilities are paid as due. Dynamics of business in Group 2 is higher than in Group 1, and consequently the oscillation is bigger, too. At the beginning of business, Group 1 invests higher sum into space rental (€12,000) than Group 2 (4000 €). Modelling revealed that in Group 1 business is not possible with a lower starting investment. The graph (Fig. 7.) shows that Group 1 takes smaller risk, but the development of financial resources on the bank account manifests stagnation and foretells the end of the business.

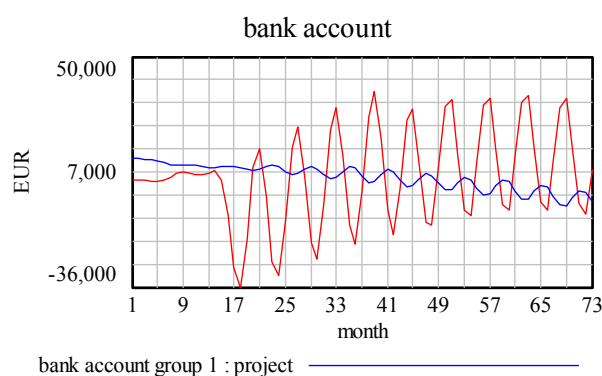


Fig. 7. Bank account balance

Conclusion and further research

Research into coworking centres in the Czech Republic and the subsequent system dynamics model showed that a coworking centre is a company that needs to offer more than just rental, in order to maintain its position in the market and so that its business activities produce profit in a long-term. Coworking centres whose business is based merely on rental are not permanently sustainable. Both the research and model proved that this type of centres cannot avoid a continuous decrease in customers' interest in their services. Sustainability of the Coworking Design Centre will be secured through five business activities: Coworking Club with a bar, Coworking Exhibition, Coworking Shop, Coworking Academy and Coworking Space. Two of these activities are loss-making (Coworking Exhibition, Coworking Academy). They generate only costs but contribute positively to the overall business model by bringing in customers. Prosperity of the Coworking Design Centre thus depends on the dynamics of all these activities that mutually influence each other.

The system dynamics model that includes feedback loops, delays, flows and stocks can be used to check the viability of a company's business plan. With the use of scenarios we can set variables according to the entry data that we are able to receive.

As the significance of cultural and creative industries is growing, the demands for better economic and business knowledge on the part of arts graduates are increasing. Teaching business with the use of managerial simulator and a model of a creative company such as the Coworking Design Centre is for students a means to searching for a more convenient and viable scenario for starting a business. The model does not primarily focus on the implementers in the branches of cultural and creative industries, but rather on innovators and promoters of these activities. A simulated training in business leads to overcoming the initial economic limitations that can be imitated on the company model, without the entrepreneur having to face the direct risk of bankruptcy. Systemic thinking and system dynamics modelling that the group of students actively participated in while creating the model of the Coworking Design Centre thus contributes to increasing the quality of arts-oriented university graduates from the subjects of creative management and enterprise.

It would be useful to focus future research on simulating business in creative centres. It is the next, higher level of a coworking centre development, which also includes live culture: a stage for musical and theatrical performances, residential stays of artists, bigger variety in trading with various creative items. Further research will thus not only focus on the sustainability of the creative centre concept, but also monitor the multiplication impact of grant resources on culture that influence the development of the whole region.

Acknowledgements

The authors are thankful to the Operational Programme Education for Competitiveness co-funded by the European Social Fund (ESF) and the national budget of the Czech Republic, grant No. CZ.1.07/2.3.00/20.0147 - "Human Resources Development in the field of Measurement and Management of Companies, Clusters and Regions Performance"; and the Internal Grant Agency of TBU, grant No. IGA/MFS/2013/001 - 'Creative Class Potential in the Zlín Region: Audiovisual and Visual Arts'. We would like to thank the following students: Jana Gadaczová, Matěj Kuděla, Eva Strakošová and Matyáš Vojáček, who participated in the practical part of the research in coworking centres.

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Culture of nursing school: students' perceptions

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Abstract

School culture is a powerful structure that facilitates understanding the behaviors of the participants through their school life. A positive and effective school culture brought about numerous benefits such as improving the commitment to the school, creating trust and preventing conflicts. In this study, perceptions of school culture among students enrolled in schools of nursing were investigated. The study is a descriptive one, which was performed with the participation of 625 students enrolled in four schools that offer nursing education. A "personal information form" and a "school culture scale" were used for data collection. The findings revealed that instructor-student relations subcategory of the scale ($X=2.04$) was the most positively perceived cultural characteristic for the students. It was also observed that student perception differ with respect to schools ($p<.05$) and there was a positive correlation between students' satisfaction about their schools and their perception of school culture. The study sets forth that students' perception of school culture positively contributes to their satisfaction with the school; therefore nursing students' perception of school culture should be improved. In future studies, the factors that influence nursing students' perception of school culture should be a more detailed examination.

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Peer-review under responsibility of the Sakarya University.

Keywords: Culture, School Culture, Student, Nursing Education, Higher Education.

Introduction

School culture is one of the most complex and important concepts in education. School culture is a powerful structure that facilitates understanding the behaviors of the participants through their school life (Stoll, 1998). In recent years, the recognition of a strong school culture as one of the most important factors in enhancing schools' effectiveness and success has further increased the interest in this issue. (Dumay, 2009; Ozdemir, 2006). School culture is defined as the basic assumptions, norms, values and artifacts that are shared by school members, which influence their functioning at school (Engels et al., 2008). School culture is defined, in a different way, as the set of rules, norms, beliefs, traditions and values, which accumulated throughout the history of the school and are shared by all individuals at school; which constitute the identity of the school, influence the functioning of school members at school; and which define the social image of the school (Hoy, 1990; Maslowski, 2001; Stoll, 1998).

The values, attitudes, beliefs and practices present within an organization are widely shared and accepted in organizations with strong cultures (Erdem & Isbasi 2001; Pratt et al., 1999; Robbins, 1993). Strong school culture emerges when managers, teachers and students unite around common values, norms, beliefs and practices. It was reported that, in schools with strong cultures, the academic staff felt better and more motivated, individuals were open to changes and innovation, and feelings of self-confidence, sharing, and appreciation were developed among members (Ozdemir, 2006; Terzi, 2007). In addition, it was emphasized that there was a work environment based on mutual trust and cooperation in which moral values and responsibilities were given priority, professional passion and excitement were promoted, sense of quality has become a tradition, and an intimate atmosphere was created (Ozdemir, 2006; Terzi, 2007; Staber, 2003). Research also indicates that academic achievements of students who experienced such a positive and socially-developed atmosphere were high, and a school with a strong culture positively influenced students' academic achievements (Dumay, 2009). Besides, it was emphasized that a positive and effective school culture brought about numerous benefits such as improving the commitment to the school, creating trust in the school and its administration, preventing conflicts, and increasing school's overall success, motivation and efficiency by shaping the behaviors and expectations of instructors and students (Erdem & Isbasi, 2001; Terzi, 2007).

Investigations on school culture provide valuable data about how the existing practices at the school should be improved (Erdem & Isbasi, 2001). One method of investigating the school culture is to examine the opinions of managers, instructors and students, who take part in the formation of this culture and who are also influenced by this culture (Kantek, 2005). It is indicated that the most effective tool of promotion in increasing the school's publicity and attractiveness, and thus ensuring its success and development is the evaluative discussions that

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students conduct with other students and other people around them (Yelkikalan et al., 2006). Schools should be aware of their cultures in order to advertise themselves to students, attract students, and survive in the competitive environment (Yelkikalan et al., 2006). Students' opinions on school culture significantly contribute to the endeavors of increasing quality and efficiency in education, improving educational processes, and enhancing the effectiveness of the basic educational functions of schools (Erdem & Isbası, 2001; Stoll, 1998; Wren, 1999). Therefore, in order the schools to maintain their function, they should be aware of their own culture and how it is perceived (Yelkikalan et al., 2006).

In the literature it was emphasized that research had been conducted on school culture in higher education institutions from different disciplines, and there was not a strong school culture in these schools but it should be improved (Argon & Kösterelioğlu, 2009; Erdem & Isbası, 2001; Yelkikalan et al., 2006; Yıldız & Bakır, 2006; Yılmaz & Oğuz, 2005). However, there is not sufficient information about the school cultures of Nursing Schools in Turkey. Kantek and Baykal (2009) investigated the Nursing Schools' culture with respect to their academic staff and concluded that the strongest cultural feature in these schools was the "student-oriented education", and also the culture of nursing schools should be strengthened. In addition to this, in both national and international literature, any information on how student nurses perceived their schools' culture could not be found.

Due to all these reasons, this study aims at investigating the cultures of institutions which provide Nursing education in Turkey from with regard to students' opinions. The data to be obtained from the data are thought to contribute in improving student-instructor relations, creating transformation strategies for nursing schools, decreasing the school leave rates and establishing a positive school environment.

Methods

Participants

The research was conducted in four schools that offer nursing education in two different cities in Turkey. Two of the schools were High School of Nursing (Schools A and C) and two of them are High School of Health (schools B and D). One of the nursing schools was in a state university, the other one was in a private university. Both High Schools of Health were in state universities. All 2nd-, 3rd- and 4th-year students enrolled in these schools were included in the scope of the research. First-year students were not included since it was thought that they were in the process of orientation and that they did not have sufficient knowledge about their schools' culture.

The data were gathered from 625 nursing students who attended school during the period in which the research was conducted. All participants were female students and the average age was 21.55 ± 1.58 (min: 18, max: 34), 26.9% of the participant students were 2nd-grade, 32.6% were 3rd-grade, and 40.5% were 4th-grade students. The minimum duration spent for education was two years while the maximum was seven years. Whereas 10.9% of them were graduates of vocational high school of health, 17.8% of them are currently employed. Of the working students, 75.7% were working in a nursing-related job and 53.6% of them were working in other part-time jobs. 7.4% of the participants reported that they were highly satisfied with their schools, 41.3% were satisfied, 42.1% were partly satisfied, and 9.3% were unsatisfied with their schools.

Instruments

A Personal Information Form and a School Culture Scale were used in the study as the data collection tools. The personal information form, developed by the researchers, includes six questions addressing students' ages, grade levels, durations of their study, their employment statuses, characteristics of their jobs and to what extent they are satisfied with their schools. School culture scale, on the other hand, was developed by Kantek, Baykal, and Altuntaş (2008) in order to determine nursing students' perception of school culture in terms of organization culture, and its validity-reliability was tested. In the validity-reliability study, the Cronbach's alpha value for the whole scale was found .93, and the Cronbach's alpha values of the sub-categories were found between .69 - .89. Item-total score correlations of the scale, which consists of 50 items, are between .26 - .65. The scale, which has eight sub-categories ("school administrators-student relations", "commitment to the school", "instructor-student relations", "reward system/openness to change", "school's structure and functioning", "relations between instructors", "relations between students" and "support"), is graded at four stages (agree -3, somewhat agree-2, disagree-1, no idea-0). The scale's minimum point is 1, maximum point is 3 and mean point is 2. The increase in the scale's mean point indicates that the student perceives the school culture positively.

Ethical Dimension

Before proceeding to the data collection stage, ethics committee approval was obtained and official permissions were received from the administrators of the relevant institutions. The researchers informed students in the classroom about the research, and the research data were collected after obtaining verbal consents of those students who were willing to participate in the study.

Data Collection

The researchers defined, through interviews with the institutions over the telephone, the classes when and where the students would be available for the research and went to the schools, after taking permissions of the instructors. The data collection tools were distributed in the classroom to the students and collected back after the students filled out them. 700 students were given the data collection tools, and 691 (98,7%) of them returned. Of these questionnaires, 66 were excluded from the analysis since they lacked certain information and, thus, statistical analyses were conducted using the data from 625 individuals.

Analysis

In the reliability analysis of the School Culture Scale the Cronbach alpha coefficient was used. For determining the individual features of students and their perception about school culture frequency, percentage distribution and arithmetic mean were used. ANOVA was used to compare the sub-category scores of the scale. Spearman correlation analysis was used to investigate the relationship between the school culture scale and the satisfaction from the school. The collected data were analyzed in computer environment by running frequency and percentage distribution, arithmetic mean and ANOVA tests through SPSS (Statistical Package for the Social Sciences) 15.0 software.

Results

As seen in Table 1, students' perception of the sub-categories of the school culture scale ranged from more positive to more negative as follows: instructor-student relations, structure/functioning, relations between instructors, commitment, relations between students, support, relations between school administrators and students, reward/openness to change. While the sub-category with the highest score is "instructor-student relations" (M=2.04, SD=.48) the sub-category with the lowest score is "reward/openness to change" (M=1.65, SD=.64).

Table 1. Mean scores of the students' school culture scale (n=625)

School culture scale sub-categories	M	SD	Min	Max
Relations between school administrators and students	1.69	.63	.00	3.00
Commitment	1.88	.61	.00	3.00
Instructor-student relations	2.04	.48	.63	3.00
Reward/Openness to change	1.65	.64	.00	3.00
Structure/Functioning	2.01	.49	.20	3.00
Relations between instructors	1.91	.66	.00	3.00
Relations between students	1.87	.52	.00	3.00
Support	1.81	.55	.25	3.00

When the school culture scale mean scores of the four nursing schools are compared (Table 2) it is seen that the highest mean score at D (X=2.07) and B (X= 2.11) belongs to the sub-category of "instructor-student relations", and at A (X=2.03) and C (X=2.26) to the sub-category of "structure/functioning". The sub-category of "relations between school administrators and students" had the lowest mean score at B (X=1.48); and the sub-category of "reward/openness to change" had the lowest mean score at D (X=1.66), A (X= 1.65) and C (X=1.72).

Table 2. Comparison of mean scores of the school culture scale's sub-categories (n=625)

School culture scale sub-categories	Schools								F	p
	A (n=177)		B (n=148)		C (n=53)		D (n=247)			
	M	SD	M	SD	M	SD	M	SD		
Relations between school administrators and students	1.77	.610	1.48	.588	1.83	.513	1.72	.678	7.326	.000*
Commitment	1.81	.618	1.76	.602	1.96	.600	1.99	.614	5.510	.001*
Instructor-student relations	1.99	.446	2.11	.516	1.86	.564	2.07	.462	4.647	.003*
Reward/Openness to change	1.65	.661	1.61	.590	1.72	.632	1.66	.663	.445	.721
Structure/Functioning	2.03	.495	1.99	.480	2.26	.381	1.96	.513	5.848	.001*
Relations between instructors	1.90	.699	1.97	.644	1.89	.645	1.88	.658	.587	.623
Relations between students	1.70	.448	1.95	.514	1.98	.658	1.93	.528	9.470	.000*
Support	1.77	.527	1.79	.557	1.84	.553	1.86	.574	1.095	.350

*p<0.05

When ANOVA was performed in order to compare the schools' scores of school culture categories; statistically significant differences were found between the schools' mean scores of sub-categories of "relations between school administrators and students" ($p=.000$), "commitment" ($p=.001$), "instructor-student relations" ($p=.003$), "structure/functioning" ($p=.001$) and "relations between students" ($p=.000$), at a significance level of 0.05. On the other hand, it was observed that no statistically significant differences exist between the schools' mean scores of sub-categories of "reward/openness to change", "relations between instructors" and "support". In statistical comparisons, made with independent variables like students' ages, grade levels and satisfaction levels with the school, in order to examine the factors that influence students' school culture scale sub-category mean scores; a significant correlation was found only between students' satisfaction levels with their schools and their mean scores of school culture scale sub-categories.

After the correlation analysis of students' school culture scale mean scores and their satisfaction levels with their schools; significant positive correlation was found in the sub-dimensions of relations between school administrators and students ($r= .329$), commitment ($r= .551$), instructor-student relations ($r= .392$), reward-openness to change ($r= .209$), structure-functioning ($r= .322$), relations between instructors ($r= .286$), relations between students ($r= .125$) and support ($r= .271$) (Table 3).

Table 3. The relationship between the mean scores of school culture scale sub-categories and satisfaction with school (n=625)

School culture scale sub-categories	Satisfaction level with the school	
	r	p
Relations between school administrators and students	.329*	.000
Commitment	.551*	.000
Instructor-student relations	.392*	.000
Reward/Openness to change	.209*	.000
Structure/Functioning	.322*	.000
Relations between instructors	.286*	.000
Relations between students	.125*	.002
Support	.271*	.000

* Correlation is significant at the 0.01 level

Discussion

The research findings demonstrate that the sub-category of instructor-student relations is the cultural characteristic that is perceived in the most positive manner by students. Similarly, in the study carried out by Kantek and Baykal (2009) to examine nursing schools' cultures from the instructors' perspectives, "student-orientedness" was found to be the strongest cultural characteristic perceived by instructors. Instructor-student relation is a fundamental relationship that forms the core of education. Outcomes of this relationship are of great importance since they directly influence student outputs like student achievement and satisfaction, and willingness to stay at the school (Ang, 2005; Frymier & Houser, 2000; Gillespie, 2004; Glossop, 2001; Glossop, 2002). Through student interaction, instructors not only contribute to students' professional development but also convey the cultural values, norms and practices of the school to students. Therefore, the finding of our study that instructor-student relations are perceived positively by students could be interpreted as a positive finding for nursing schools as it is likely to positively contribute to student outputs and to the creation of a strong school culture.

Another important finding of the study is that participant students' mean scores of school culture scale sub-categories are generally distributed around median scores. This finding can be interpreted in a way that students' perception of school culture is not clear yet. It is observed that other studies on nursing schools' cultures yielded similar results. In Hawks (1999) conducted in nine nursing colleges, it was found that nursing schools do not have strong cultures. Besides, Kantek and Baykal (2009) argued that there is not a total consensus among instructors in nursing schools about the common values, norms, beliefs and practices.

Studies conducted on school culture in different fields of university education suggest similar results. For instance, Bikmoradi et al. (2009) conducted in an Iranian Medical School and Ozer et al. (2008) in a Turkish Medical School argue that these schools' cultures are weak. In three different studies carried out in three different schools of physical training and sports in Turkey, it was concluded that these schools do not have strong organizational cultures (Bilir et al., 2003; Cimen, 2001; Yıldız & Bakır 2006). In a similar fashion, Erdem and Isbası (2001) examined the perceptions of organizational culture amongst the students of Faculties of

Economics and Administrative Sciences, and concluded that these schools do not have strong cultures.

The findings of this study that nursing students' perception of school culture is low can be interpreted as an unsurprising situation for university education environments. However, it should be noted that these findings point to certain potential risks. It is suggested in the literature, that there is a direct correlation between an organization's performance and the strength of its culture; that is, especially those organizations that have strong cultures display better performances than others. Organization members in strong cultures internalize the cultural values through processes like teaching, learning, facilitating and sharing. This way, improvements are observed in members' motivations, commitments and performances, and decreases are seen in the rates of leaving the organization (Erdem & Isbası, 2001; Maslowski, 2001; Robbins, 1993; Sisman, 2002). In weak cultures, on the other hand, the case is the exact opposite. It could be argued that the finding of our study that students do not perceive school administrators, relations between themselves, rewards for their achievements, the value given to students and the school's image in positive manners has a significant impact on reaching to this result. It could be suggested that school administrators' efforts to alleviate these problems would contribute to the formation of strong school cultures.

When students' perceptions of their schools' cultures are compared, it was found that there were similar perceptions and no statistically significant differences in sub-categories of reward/change, relations between instructors and support, whereas it was found that there were statistically highly significant perception differences in sub-categories of student-instructor relations, relations between school administrators and students, relations between instructors, relations between students, commitment and structure/functioning. Various studies (Erdem & Isbası, 2001; Terzi, 2007; Oğuz, 2005) similarly reported that there were perception differences between schools and departments. Given the fact that culture of an organization is unique to that organization (Stoll, 1988; Sisman, 2002), it could be suggested that students' perceptions of school culture are expected to differ in certain ways.

When the relation between the sub-category scores of the school culture scale and the satisfaction from school was examined, a positive correlation between these variables was found. Student satisfaction means to what extent students' expectations and necessities regarding the school and educational environment are met, and it contributes to students' intellectual and social effective development and change (Liegler, 1997). Many authors have suggested that the organizational culture has an impact on students' learning and satisfaction (Orucu & Ayhan, 2001; Pratt et al., 1999; Sisman, 2002). Findings of this study support this idea. It could be argued that a positive correlation between a student's satisfaction with his/her school and the perceived school culture is a significant clue about the practices of school administration and instructors. School administrators and instructors can improve students' positive perceptions of school culture further by increasing their satisfaction levels.

Limitations

The research was carried out in a limited number of schools and the findings obtained regarding school culture are restricted to the perceptions of the participants who were present on the date when the study was conducted. Therefore, these findings cannot be generalized to all schools of nursing. Nursing schools' cultures are bounded to the perceptions of students attending these schools. It should be noted that perceptions of other workers in these schools might be different.

Conclusion

In this study, perceptions of school culture among nursing students enrolled in schools of nursing in Turkey were investigated. It was observed, after the study, that there is a need to positively improve students' perceptions of school culture. Findings of this research were shared with the schools of nursing that constituted the sample and, thus, important data were provided for improvement steps to be taken in these institutions. Determining students' expectations regarding the school and education, such as focusing more on rewarding at schools, ensuring students' participation in educational decision-making processes and increasing students' participation in social activities, will significantly contribute to studies aiming at improving students' perceptions. It could be stated that a more detailed examination of the factors that influence students' perceptions of school culture and examination of perceptions not only of students but also of other workers at the school in future studies will provide more beneficial data for the efforts to improve school culture.

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Current issues in Slovak higher education

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Abstract

This paper considers the problem of universities as an important determinant of development of society. It is based on the mission of higher education in the context of the current needs of society. It accentuates the essential need for quality of higher education and also highlights some of the social problems associated with the application of university graduates in practice that results from economic and societal problems as well. This is particularly due to the absence of mechanisms to evaluate and present the responsibility of universities to society. Advancing trend of declining quality of educational process and research is noticeable in connection with the worsening climate for work at universities, increasing the number of university students etc. Part of the paper is a survey of student satisfaction with their university studies. Acquired research findings highlight some problems in university preparatory from the university students' point of view. At the same time it also points to the possibility of improving higher education in the context of the needs of society.

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Peer-review under responsibility of the Sakarya University.

Keywords: society; education; higher education

1. Introduction

Education and training of person living in the society at the beginning of the third millennium should provide a person with a holistic picture of the world, in all its aspects and developmental dimensions. This world must be in human cognitive system embedded within the natural world composed of mutually integrated system of cognitive representation of the natural properties both in terms of individual disciplines. Picture of the world should allow person to orientate in the surrounding reality in the context of individual human assumptions and provide it with a holistic view of its close environment. But it is necessary to stress out that the importance of detailed and specific facts is currently negligible, because the information of various kinds are readily available through sources of information (e.g. Uncle Google) and its amount is unnecessarily burdensome for memory.

2. Higher education problems

The increasing flow of information emphasizes the skill requirement of efficient search, sorting and processing. This task has to be one of the key tasks of each school. In contrast, higher education is already conceived targeted to specific professional perspective and should satisfy one of the highest human needs - self-realization and within this context it should be a tool for the application of the young person in social practice.

What is it therefore like in Slovakia? Has higher education in the Slovak Republic been focused on the relevance, i.e. high degree of consistency between expectations and what higher education provides to society? The fact proves that it is not so, despite the fact that we have a lot of enthusiastic people willing and able to develop higher education.

We have many universities, but what is missing is long-term concept and definition of the various universities, the lack of focus on the needs of society, but also students, reserves in imperfect legislation, insufficient diversification of curricula, expanding bureaucracy and downright painful financially starving. There is some evidence of such claims.

While in July 2000 there were 21 state universities and two non-state universities in Slovakia, in the academic year 2012/2013, 20 public universities, three state universities, as well as 13 private universities and two foreign universities based in the Czech Republic provided higher education.

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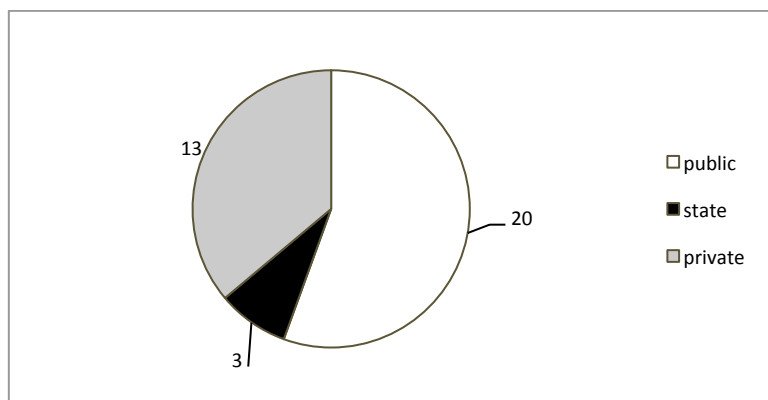


Fig. 1. Number of Universities in Slovakia in 2013.

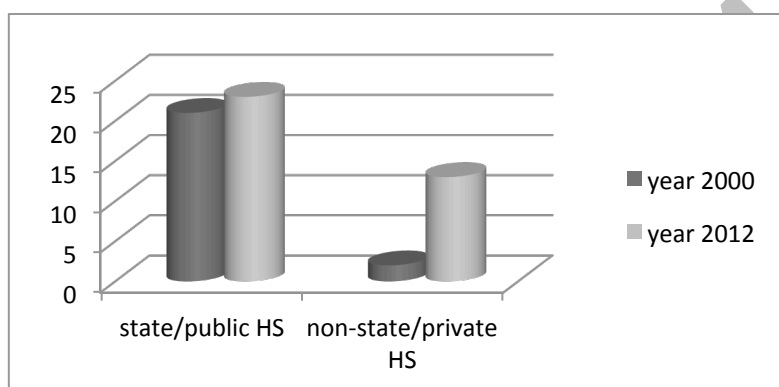


Fig 2. Comparison of universities in Slovakia in 2000 and 2012

Is it a lot of not? In order to compare we will list number of universities in two European countries that are almost the same in size as Slovakia: Denmark and Switzerland.

Table 1. Population and area of the selected states.

State	Population	Area (km ²)
Slovakia	5.43 mil.	49 036
Denmark	5.5 mil.	43 094
Switzerland	7.4 mil.	41 285

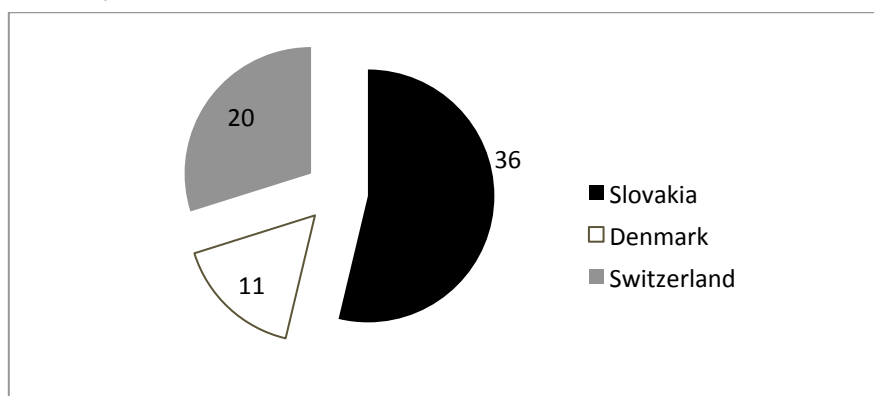


Fig. 3. Number of higher schools and universities in given European states

In Slovakia there are 18 universities and 18 other higher educational institutions compared to 11 universities in Denmark (5 multi departmental and 6 specialized) and 12 universities in Switzerland (10 cantonal and 2 federal institutes of technology, 8 vocational higher schools).

Table 2. Number of university students in given European states.

State	Number
Slovakia	200 743
Denmark	196 473
Switzerland	222 656

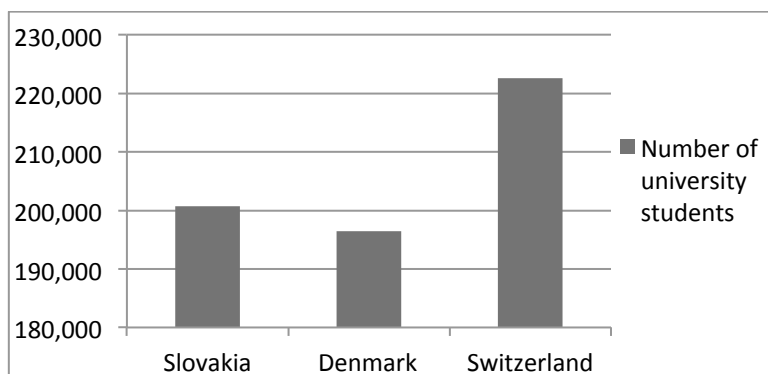


Fig. 4. Number of university students in given European states

From the comparison it is evident that comparing with those states we have many universities. Unfortunately, we also have a lot of graduates who are unable to enter the labour market.

Table 3. Unemployment of university graduates – year 2013.

State	Number
higher ed. 1st degree	456
higher ed. 2nd degree	2242
higher ed. 3rd degree	50
Total	2748

Source: http://www.upsvar.sk/statistiky/nezamestnanost-mesacne-statistiky.html?page_id=1254 (quoted 2014-06-17)

<http://www.novekolstvo.sk/article.php?973> (quoted 2014-06-17)

Documents relating to higher education in Slovakia say („*Správa o priebehu reformy vysokého školstva na Slovensku a jej dopadoch na študentov vysokých škôl, Dopráva o plnení koncepcie ďalšieho rozvoja vysokého školstva na Slovensku pre 21. storočie*“) that the main mission of higher education is to develop a harmonious personality, knowledge, wisdom, goodness and creativity in a person and contribute to sustainable development and the improvement of society as a whole. Interest in higher education evokes the idea that there are a lot of young people for whom education is really important goal of life - hence their desire to be wise, successful and necessary not only for loved ones, but also for the society in which they live. Since I work in a faculty that prepares future teachers, I will build on my own experience.

Despite challenging times and inadequate financial remuneration of teachers there are still applicants interested in the teaching profession. Statistics show that there are many universities that train future teachers, paradoxically, even those that do not have a teaching degree programs, but their study also includes training requirements for teaching qualifications through supplementary pedagogical study.

Table 4. Number of teacher-training universities in Slovakia.

State	Teacher-training study programmes	Supplementary pedagogical study
Public schools	11	16
State schools	0	3
Private schools	1	4
Total	12	23

This enormous interest in the profession of a teacher has several explanations.

The first one could be that this is a profession that significantly affects the life of individual, families and society, and even now it is seen more as a mission. At the same time there is no profession that would have so many admirers and critics at the same time. It can be caused by the fact that each of us have had or have experience with this profession. Certainly there are a lot of young people who realize the mission of the teaching profession and are willing to do everything possible to be ready for this challenging, responsible, interesting and beautiful work.

The second possible explanation is that many young people choose the path of university education, only to somehow bridge the period of unemployment after graduating from secondary school. They are usually candidates with lesser aspirations for higher education.

Our experience shows that among students there are also those who have chosen studying teaching because of failing to be accepted to other university what they are interested in and they think they can handle it without major problems and they do not find teacher's training very difficult.

We therefore have relatively many students but paradoxically not all of them will be future intellectual elite of our society that will affect our social development and even be its driver. It is likely that even successful students will not all become teachers. There are certainly many reasons, but the principal one is that many educated young people (mostly very diligent ones) are more eager to live and work beyond borders of Slovakia, they are confident that their work elsewhere will be rewarded better and allow them to have better economic and social status.

Goal of universities is to prepare knowledgeable, highly trained individuals, minded, creative, and hardworking with the skill to constantly work on them. At the same time the individual with attributes of ethical, freedom, i.e. one that knows his/her limits, freedom, wisdom as well as knowledge of necessity. Independent expression of the ethical, cultural and social problems, and analysis of emerging social, economic, cultural problems should be absent on the academic ground. It would be tragic if the academic land did not serve for fostering universal values of humanity such as truth, mutual respect and esteem. It is also undeniable that higher education enables one to self-fulfilment, creating a more exclusive stratification in society, a higher degree of independence, decision-making and accountability not only individually but also socially. These expectations are feasible only if we are able to create conditions for the development of such personality at our universities. Necessary condition in this respect is to remove the massification of higher education. Receiving a large number of students brings not only organisational but also qualitative complication. Only the most skilful ones should study at universities, these who will represent and develop their field of study so it can obtain better quality. Averagely prepared individuals are unable to develop their field to the extraordinary one neither state will not benefit from average individuals. Higher number of accepted students means the need for more teachers who are able to implement higher education. However, we cannot produce them in a moment, so doctoral students are needed to help in teaching and they are not always at a level that is necessary for university.

Number of accepted indicates that tendency to reduce demands on the study has expanded (as a consequence of accepting less-trained and talented candidates) and we have many students in groups. And we do not discuss with them enough, we do not try to find out their opinions, we convince them about certain rules. Starting point could be a legitimate requirement to reduce the number of accepted ones. To place greater emphasis on selection and quality when selecting students (Řádek et al.). But the problem is, that for the vast majority of study programs are so far accepted candidates in line with the trends evident in Slovakia without entrance exams, based on results from secondary schools. Based on our experience we know that the quality of secondary school is diverse. Achieved grade average does not always reflect the real level of education and preparation for university study. Direct contact with students is reduced. The right higher education should be based on a self-study. But to orientate, excite and discuss are the vital needs for successful learning in universities. Problematic is the fact that the content of education in various fields does not always reflect societal needs. Painful is that we

stopped to prepare and develop the field that are necessarily needed in our society. Social practice does not only need doctors, managers, lawyers, and teachers. At universities, there is still a problem which is, unfortunately, a problem of moral principle. Boundless individualism presented by absolute individual freedom, extreme materialisation of society, commercialization of culture, preferring hedonistic pleasures, presented contradictory values causes mainly young people to lose their orientation in what is good and right (Kučerová, 2013). Volatility of values of society requires greater accentuation of moral competence. Here, at university students should learn, especially from our teachers, which means accepting, arguing, concluding, factual and constructive criticism, deliberate decision to compromise, be responsible and tolerant.

3. Opinion survey on university study

Experience that young people gain in their often counterproductive personal development is not clearly positive in the academic environment. The survey conducted in the fall semester of the academic year 2012/2013 supports it as well. Its aim was to investigate students' opinions on satisfaction and quality of study at our university. Although the sample of respondents (172) does not allow broader application of identified research data, it provides much food for thought. I will mention only the most interesting data. In the introduction of the survey we investigated whether respondents had clear idea of what they want to study prior to entering our university. Response of 44.1% of them was positive. The responses, however, opinion differed in terms of gender (66% male students, 39% female students). Only one third of the examined sample (27.9%) said that they study exactly what they are interested in. The greater part of surveyed (62.8%) stated that study only partly. To clarify, it should be noted that teacher training in Slovakia is a combination of two subjects.

In the next section, we were interested in student satisfaction with university studies. About a quarter of respondents (25.6%) expressed clear satisfaction. Most respondents, 65.1% said they have little reservations in this regard, but they are satisfied. From the aspect of gender there were differences within the responses again. Male students are happier - up to 83.3%. Only 8.11% of female respondents expressed total satisfaction and 18.9% are not satisfied with their study.

We were also interested in the field of university studies which have the most complaints. Responses were as follows: course content 32.5%, 23.2% system of study, 16.3% approach of teachers, the educational process conditions 7%.

In terms of gender the biggest differences of opinion were on the course content. Female students are less satisfied - up 62.2% compared with 33% of male respondents. Male students (33%) are often more satisfied with the approach of teachers than female students (18.9%).

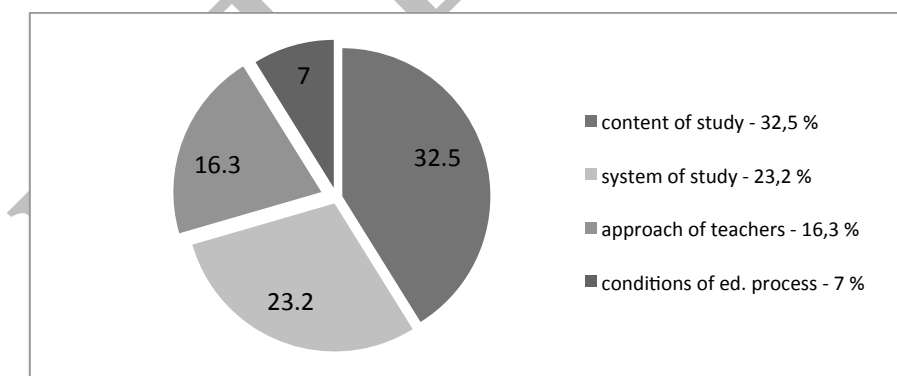


Fig 5. Respondents' views on the shortcomings of university studies

Another area of our interest was to find out how they evaluate their decision to study at our university. Only 11.62% of respondents expressed total satisfaction, 69.7% are partially satisfied, 13.9% are dissatisfied and 2.3% regret their study at our university.

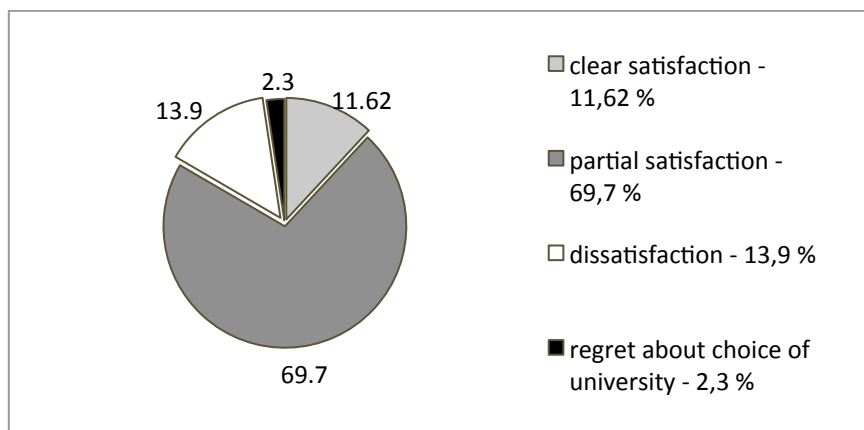


Fig. 6. Satisfaction of respondents with the decision to study at the University of Prešov

Having said this, we wonder if they would again choose the possibility to study at our university. Positive response was stated by approximately one-third (30.2%) of the examined sample and 20.9% of respondents would prefer to have attended another university. Answer 'I do not know' voted 32.6% and unambiguous 'no' for university studies at PU expressed 11.6% of our students.

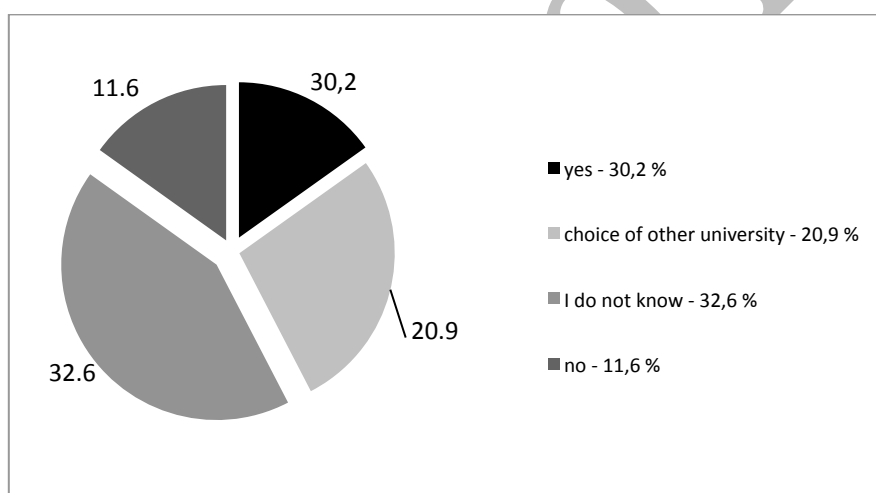


Fig. 7. Choice to study again at university

Two questions in the survey were open. One of them concerned the possibility to send a message to teacher who they admire the most and the second one, to send a message to the teacher to whom they have the greatest reservations. Obtained responses were very interesting.

Positive references stated that students appreciate the relationship of the teacher to students, the atmosphere in class, professionalism, friendliness, willingness to pay more attention than necessary, precision in expressing and formulating requirements, creating a space for debate and respect for the opinions.

The most frequent negative references were as follows: excessive rigorist, not interesting lessons, excessive theorizing, incomprehensible explaining, chaotic tasks, misconstruction of subject of the study, too much complexity of the evaluation.

There were also reservations such as high professionalism and inability to explain, bias in evaluation, unwillingness to help, not enough space for discussions, approach to students from a position of "superior - subordinate" and so on.

Of course, we cannot generalize the findings on the basis of this sample, nevertheless, they suggest us what we have in order to enhance the quality of higher education focus on.

Especially at universities we need university teachers of high quality who are not only professionally, but also professionally - methodically prepared for work with students. In fact, they present study and in particular

through the work of teachers, students perceive the quality of a particular university. We necessarily need to improve the content of education and the educational process conditions. Finally, we need obtain feedback, so that we create the conditions for streamlining the educational process of university education.

Conclusion

Despite all the complexity of today we must do all we can in order to prepare highly qualified professionals, people who will know and will want to prove more in their field. Average student will give an average performance in practice. If higher education should provide a path to professionalism in a particular field, then we shall insist on that. It is in the hands of us, teachers. We are the ones who must guard the level of our field. Unprofessionalism, indifference, superficiality, sometimes inability or lack of preparation to provide students with an adequate form of what they need, unfortunately, shall return to us and certainly none of us wishes so.

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Curricular innovation and emerging knowledge in chemical engineering in Mexico. Study comparative

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Abstract

The purposes in this research were identifying the principal elements in the chemical engineering curriculum in some universities in Mexico. In this comparative study, it is presented a series of results from an analysis in the curriculum of the chemical engineering college degree. On one hand, some curricular proposals include the incorporation of emergent issues and novelty affairs in relation to innovative technologies, studies of renewable energy sources and synthetic fuels, recycling of products and byproducts, biotechnology, polymers, nano-technologies and new materials. On the other the approach of educational proposals focusing on the student's self-learning, such as: the incorporation of virtual educational modalities, multilingual education, the approach to professional stages (learning by doing), and the internationalization and quality of educational programs. Summarizing the results, it can be noted that in analyzed curricula, the need to incorporate in addition to new knowledge, provide environments of open and flexible learning, in which the potential of new educational technologies is exploited is observed, the databases, expert systems, multimedia and telecommunications

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Peer-review under responsibility of the Sakarya University.

Keywords: Curricular Innovation; Chemical Engineering educational programs

1. Introduction

Chemical Engineering is a science in itself whose bases are the unit operations (also called basic) in a sequence and proper coordination constitute a chemical process as operating on an industrial scale. This engineering is also related to the art of designing, calculating, design, build and deploy devices that allow for industrial scale any chemical transformation. In the teaching of chemical engineering focus four kinetic processes: transfer of momentum, heat, matter and chemical change (including biochemical), relating to the laws of conservation of matter and energy, as well as the thermodynamics provide knowledge on processes and process plants.

Chemical engineering is structured around two main paradigms that have historically happened as stages of evolution and structuring of a system of knowledge about phenomena and processes related to the development of materials and substances by chemical changes and / or changes in physical properties of the subject (Anaya, 2009)

The paradigm of *Unit Operations* and studying the common stages of industrial processes, such as heat transfer, distillation, fluid flow, filtration, grinding, milling, and crystallization from where an analytical approximation of the chemical processes phenomena whose general behavior is independent of the specific nature of the substances occur. The paradigm of *Transport Phenomena* developed by Bird and Lightfoot (2006), from a different logic for the analysis and study of physic-chemical phenomena, placing more emphasis on understanding the basic physical principles. With the emergence of new information technologies and communication, as well as the contributions of chaos theory and the theory of irreversible processes, some authors have noted the emergence of a third paradigm, *Molecular modeling* supported by theoretical principles and theories molecular and microscopic as a result of the molecular structure and molecular interactions behavior. Moreover, with the emergence in the scientific scenario of *Molecular biology and genetic engineering*

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creates the basis to build fourth paradigm of chemical engineering. This fourth paradigm addresses the analysis and study of biological phenomena and processes in the manufacture of chemicals and materials.

The future development of chemical engineering not only addresses the challenges and opportunities for the development of new products and processes generated by the demands of microelectronics, communications, computers, and other emerging industries, or improvement of conventional processes but also will be characterized by the introduction to the chemical process industries to new tools and technologies as well as emerging issues.

On the other hand, in the formation and chemical engineers is involved the development of specific and generic skills that will enable future professionals to perform successfully in the workplace (ABET, 2001). These skills are likely to be developed in the undergraduate curriculum. Specific skills are those of own disciplinary and professional character of chemical engineering (examples of which are related to knowledge, basic science knowledge and know-how, the applied sciences of engineering, such as design, calculate, design, operate predict changes). Generic skills (transverse in curriculum) are those seeking to promote the formation of the student, are instrumental (analytical, problem solving), interpersonal (communication, decision making) and systemic (teamwork), Passow (2012).

In the case of disciplinary powers of Chemical Engineering, the Accrediting Bureau of Engineering and Technology (ABET for its acronym in English) has identified the following skills that can be developed in the new curriculum of chemical engineers:

1. Ability to apply knowledge of mathematics, science and engineering
2. Ability to design experiments and analyze and interpret data
3. Ability to design a chemical process
4. Ability to identify, formulate and solve engineering problems
5. Ability to use modern engineering tools
6. Ability to work in multidisciplinary teams
7. Understanding of professional and ethical responsibility
8. Ability to communicate effectively
9. Ability to understand engineering in the global / social context
10. Assessment and learning capacity for life
11. Knowledge of contemporary issues

2. Methodology

To study the issue, all the educational programs of chemical engineering at the state's public universities that are part of the Central-South in Mexico were identified as empirical referents.

The research focused on the following questions:

1. What are the elements of curriculum innovation of programs in Bachelor of Chemical Engineering at the state's public universities in the south central region of Mexico?
2. Are there similarities and differences between the curricular proposals of these universities?
3. Will consider proposals being developed skills development as the guiding principle of curriculum design?

The methodological strategy corresponds to a study of documentary-style, from the retrieval and review of working papers such as plans and curricula, educational guidelines and academics regulations, and other institutional documents. The analysis units were established: a) purpose of the program, b) organization and structure of the program, c) disciplinary and generic skills, d) orientation of the curriculum content, e) modes of subjects, f) learning strategies and g) graduate profile.

3. Discussion

The state public universities that form the south-central region in Mexico are: University of Guerrero (UAGro), University of Hidalgo (UAH), University of State Mexico (UAEMex), University of Morelos (UAEM), University of Puebla (BUAP), University of Querétaro (UAQ) and University of Tlaxcala (UATx).

When analyzing chemical engineering programs, it was identified that educational programs are offered in Chemical Engineering in only five of the seven public universities (UAEM, UAEMex, UAQ, BUAP and UAH). With regard to recognition of the quality of academic programs, only the national agency accreditation engineering programs have endorsed four of the five, in this case by the Accreditation Council for the Teaching of Engineering (CACEI), such programs are to UAEMex, BUAP, UAQ and UAEM.

The importance of the comprehensive training of the professional chemical engineering, its relationship with the processing industry of goods and services and ethical commitment to environment is highlighted. In terms of

organization and structure of the program is manifested in all the programs that compliance with the minimum requirements of the evaluators and accrediting agencies (CACEI).

Approach to business scenarios in the curriculum through work placements is observed. Regarding the orientation of the curriculum content was found that there were similarities in terms of the axes or formative stages: basic, disciplinary and professional profile, integrating them about 60 subjects.

As educational innovations, some proposals have opted to introduce unconventional methods in teaching subjects by incorporating hybrid and virtual component, stand incorporating subjects humanistic and civic education (especially BUAP proposal), the development of skills in the use of information technologies and communication, complex workshops and tutorial programs that serve the development of learning strategies and critical thinking. Regarding the graduate profile are considered skills that development generic and professional skills.

Emerging issues in the subjects of professional profile, striking the definition of areas of emphasis (Processes, Materials Science, Environmental Science) where incorporated thematic product design, optimization of supply chains and product life cycles, energy and sustainable development, recycling and by-products, biotechnology, polymers and new materials, as well as projects of innovation and development.

4. Conclusion

Summarizing the results, it can be noted that in analyzed curricula, the need to incorporate in addition to new knowledge, provide environments of open and flexible learning, in which the potential of new educational technologies is exploited is observed, the databases, expert systems, multimedia and telecommunications.

Skills development and skills training in general problem solving, mathematical modeling, simulation and intellectual operations, as well as the development of critical and creative thinking is required. This requires changes in teaching methodologies. Learning should be done through open problems with more active participation of students; showing "theory in action" - by virtual simulation environments and real phenomena, or practice related to the specific problems of chemical engineering (learning by doing) processes - through which to rediscover or verify theories, principles and laws comprising new chemical engineering paradigm.

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Curriculum differentiation: a study with institutionalized young's attending vocational education

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Abstract

Curriculum differentiation stresses different learning contexts and it has assumed a strategic target in the promotion of young's education and training opportunities.

This study is part of an ongoing empirical work, which aims to know the characteristics and perspectives of vocational identity of some institutionalized young's, fulfilling judicial (court) measures, and attending vocational education in Portuguese Educational Centers. The methodological plan used included a mixed approach which beheld two different moments: 1) sociodemographic data; the application of the *Dellas Identity Status Inventory Occupation* scale, and 2) semi-structured interviews. The participants were institutionalized young's between the ages of 13-20 years old.

Regarding the results, the participant young's seem to reveal difficulties in defining and having a perspective of a clear vocational position.

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Peer-review under responsibility of the Sakarya University.

Keywords: Curriculum differentiation; Institutionalized young's; Educational Centers; Vocational education

1. Introduction

In the global educational changes, the standardizing of the curricular decisions can be interpreted in the context of the following question: "Are curriculum and instruction in fact becoming more similar about the world?" (Anderson-Levitt, 2008, p.349). Answering to the question, the curriculum intent is apparently becoming more uniform around the world and what actually happens in the classroom varies widely (*ibid.*). This ambivalent and apparent contradiction presents an important opportunity to study the two intertwined faces of the curricular coin: on the one hand, the uniformity promoted by the borrowing and lending policies (Steiner-Khamsi, 2012), on the other hand, the curricular diversity, namely the curricular project, is focused on the problem of access to school, on the targeted groups (Ladson-Billings & Brown, 2008), on the multicultural contexts (Kanu, 2006), and on the special educational needs. However, it is not possible to analyse the educational and social changes without a deep study of the practices and politics of the curriculum differentiation (Pacheco, 2012; Guimarães, Silva & Pacheco, 2012).

This paper is part of a broader ongoing research project, entitled *Feedback, Identity and Trajectories in Education: Dynamics and Consequences* (FITE- Contract PTDC/CPE-PEC/121238/2010), where a study is being developed on the "Development of vocational identity of institutionalized young's in Portuguese educational centers". Specifically, regarding the characteristics of vocational identity of institutionalized young people attending courses of Education and Training for Adults (therefore EFA) and perceptions of value of some of them on vocational education, we are on the process of discussing the relevance and suitability of the EFA curriculum in the construction and development on their vocational identity and life competencies.

On the 21st century, in the field of juvenile justice, the Portuguese legal system based on international models determines that all children and young people who require protection, or have committed acts which qualify as crimes, are designed to ensure their civil and social rights by the Guardianship Act Education (Law No 166/99 of 14 October, therefore LTE) in force since 2001. LTE is applicable to young's of ages ranging between 12 and 16 years old, and it is also for those who have not completed 18 years (upon legal decision in the first

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instance), through measures of Guardianship Education (therefore MTE). These measures include the internment in educational centers (article 4th, paragraph 1, LTE) and are applied under three regimes: open, semi-open and closed. Educational centers (EC), being under the control of the Ministry of Justice, are establishments of educative intervention, and aim to provide young people with temporary absence of their usual social contexts; the use of educative programs and teaching methods to empower young people on values and enable them in the future to lead a life with social and legal responsibilities (article 17th, LTE). Concretely, the teaching methods used in Portuguese Educational Centers (EC) are based on the vocational education, in which institutionalized young's have the possibility to engage in EFA courses, accessing conditions to develop some competences in order to perform a future job. The engagement of young people in vocational training "holds an important formative and developmental value, to great effect both in identity construction of individuals or in the process of their social integration" (Gouveia-Pereira, 2008, p.111).

EFA courses are "pathways in education and training vocational qualifications, designed for young people less than 15 years old at risk of leaving school or who have left school before the end of compulsory education" article (3rd article, Law No.18228/2008) The main goal of these courses is to provide educational qualifications and/or professional skills, in a perspective of (re)integration of young people in the labour market and seek to contribute to a deficit reduction of school and professional qualification of the Portuguese population (Canelas, 2008). Regarding the type of vocational training, the EFA courses offer a dual certification, which is simultaneously academic and professional. Assuming an equivalence training to the 1st, 2nd and 3rd cycles of basic education and secondary education (known as type B1, B2, B3, and ES), also provide the acquisition of school certificates that correspond to the respective levels of learning and vocational qualifications, trying to ensure both the communicability between education and the world of work (Quintas, 2008).

European framework and Portuguese reality stress the vocational education and curriculum differentiation as a strategy to reduce the school early leaving and to the acquisition of the relevant skills needed in this "knowledge society". Education and training are viewed as a key to a smarter, greener, more inclusive world for engaging young's in a sustainable life design (European Commission, 2013).

2. Methodology

The design of our research belongs to the interpretative paradigm and our main goal is to know the value attributed to vocational education by institutionalized young's in EC, regarding their vocational characteristics and future perspectives in developing life competencies.

The data used in this study was taken from an ongoing empirical research on institutionalized young's vocational identity. The methodological plan used included a mixed approach (Creswell & Clark, 2007) and the data was collected in two different moments, during the academic year of 2012/2013.

2.1 Participants

In a first moment, the sociodemographic sheets and the DISI-O scale were applied to 136 young's between the ages of 13-20 years old ($M=16,5$; $SD=1,24$), institutionalized in 5 Portuguese EC. These participants were all male and were attending 11 different EFA courses: Waiter, Kitchen, Hotel Maintenance Operator, Woodwork, Gardening and Green Spaces, Pre Printing Operator, Painting and Construction, Electricity Facilities, Carpentry, Locksmith and Installation and Computers Repair.

In the second moment of the research, from the preliminary results of DISI-O scale, 14 young's between the ages of 14 and 19 years old ($M = 16,7$, $SD = 1,03$), were selected to participate in the interviews. These participants were fulfilling legal measures for having committed crimes such as robbery, offense to the physical integrity, property and rape. They glowing measures in the judicial system were of three types: open, semi-open and closed system. Depending on the severity of the acts committed these measures ranged from 8 up to 36 months.

In terms of educative projects these 14 young's were attending some of the EFA courses designated above.

2.2 Instruments and procedure

In a first moment, in 5 Portuguese EC, which authorized this study, sociodemographic data was collected, to ascertain both the ages and courses attended by the young people. It was also applied *Dellas Identity Status Inventory Occupation* scale (DISI-O, Dellas & Jernigan, 1981), which has already been adapted to the Portuguese population by Taveira and Campos (1987), in order to understand how the young's vocational identity was being resolved. This scale has 35 items sorted into five stages of vocational identity, similar to the taxonomy developed by Marcia (1966).

The first author of this paper in the courses above mentioned has supervised the filling of the instruments.

This task took place in the normal hours of the EFA courses and the participants cooperated voluntarily, taking the necessary time to properly answer the full scale. Statistical analyses employed SPSS 20.0 for Windows.

In a second moment, from preliminary results of the first moment, semi structure interviews were conducted. The interviews were carried out using a guide, in the same 5 Portuguese EC, according to the young's availability.

3. Results

This paper considers part of the data as resulting of the two distinct moments described above. Concretely, some of sociodemographic data will be presented as well as the results obtained by the application of DISI-O scale, regarding the evaluation of the resolution modes of the young's vocational identity. Sequentially, the content analysis of two of the questions included in the semi structured interviews, which meets the main objective of this work.

3.1 First methodological moment

In Table 1 it is possible to read that the mean age of the 136 institutionalized young's is approximately 16 years. Regarding the age of these young's in the different courses attended were very close, being quite evident that the youngest participants were attending the Installation and Computer Repair course, and the oldest the Hotel Operator Maintenance course. It is also possible to read that the most attended was the Woodwork course and the least was the Carpentry course.

Table 1
Descriptive Statistics of Young ages and courses attended

EFA Courses	Young Ages		N
	<i>M</i>	<i>DP</i>	
Waiter	16,55	1,128	11
Hotel Maintenance Operator	17,24	,970	17
Kitchen	16,44	1,130	9
Woodwork	16,35	1,056	26
Gardening and Green Spaces	16,08	1,782	12
Pre Printing Operator	17,00	1,069	8
Painting and Civil Construction	15,93	1,439	14
Electricity Facilities	16,43	,978	21
Carpentry	17,00	1,225	5
Locksmith	17,00	1,265	6
Installation and Computer Repair	15,57	1,397	7
Total	16,48	1,241	136

In Figure 1, regarding the EFA courses attended it is possible to read the means results of the evaluation of the resolution modes of the young's vocational identity in the 5 dimensions of DISI-O Scale: Achievement; Moratorium; Foreclosure; Diffusion-Diffusion; Diffusion Luck.

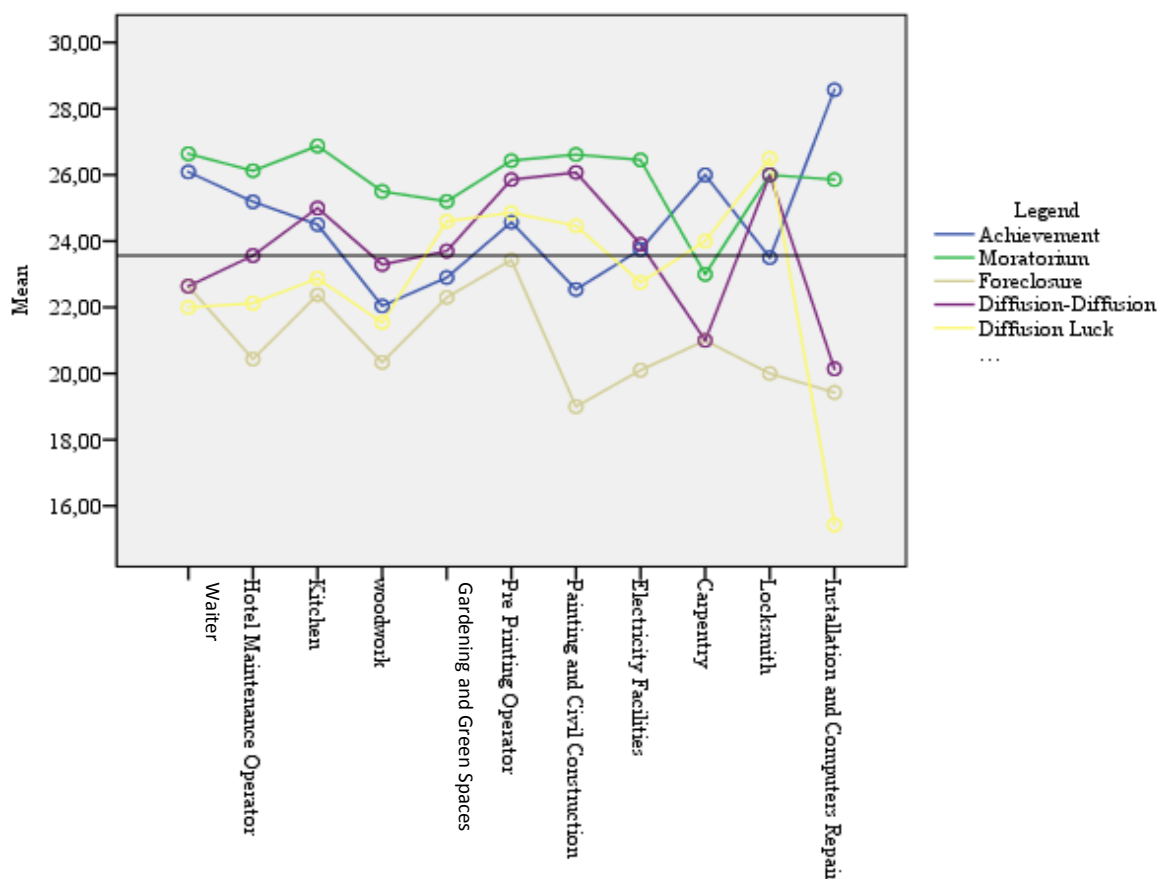


Fig. 1. Descriptive statistics in DISI-O dimensions by EFA courses

Looking at Figure 1 it is possible to read that most of the institutionalized young's tend to occupy the dimension of *Moratorium* identity, which is characterized by young people who are living in a period of exploration of the issues of identity, while expressing difficulty in making choices. It is also possible to see that the training group more certain of their vocational identity was attending the Installation and Computer Repair. At the same the more diffuse ones were attending Pre Printing operator; Painting and Civil Construction and Locksmith courses.

3.2 Second methodological moment

In this second moment of our research, 14 youngs agreed to participate. Summarily, these youngs were attending EFA courses such as: Waiter, Hotel Maintenance Operator, Woodwork, Gardening and Green Spaces, Painting and Civil Construction, Electricity Facilities, Locksmith and Installation and Computer Repair.

The two questions that we will deal with, which meet the objective of this work, are the following:

- Do you think the training you are receiving meets what you would like to come to do as a job?
- Can attending an EFA course in Educational Centers be a good way to help decide what you may come to be or do in future?

The information collected was analyzed by a content analysis process (Bardin, 2011). The unit of analysis is the young's answers and the emergent categories from this content analysis are personal and social aspects that young people seem to value for their vocational future perspectives.

For the first question "Do you think the training you are receiving meets what you would like to come to do as a job?", the most frequently cited response implicated comments involving more personal aspects related to dislike of the course, such as:

- I do like this course, because I would like to be fireman* [Kitchen, 4A];
- No, because I would like to be a Vet* [Kitchen, 31A];
- No because I would like to be a Police man* [Woodwork, 3B];
- No, because I would like to be a footballer* [Gardening and Green Spaces, 9E];

But some of them said:

- Yes, is this I want to do* [Kitchen, 5A];
- Yes, maybe with this course I will find a job* [Gardening and Green Spaces, 10B];

Yes, I have to learn something [Hotel Maintenance Operator, 16E];
... it is very soon to think in a job, but think it does not hurt [Hotel Maintenance Operator, 12D]

In terms of social aspects, of some young seems to be a concern and important to get a job, for example:
...I would like to be a mechanic, but maybe it helps me to find a job [Painting and Civil construction, 1C];
... it will helps me to find a job, whether I like it or not, but it always helps [Waiter, 8A].

From the young's answers to the second question "Can attending an EFA course in Educational Centers be a good way to help decide what you may come to be or do in future?", appear to us to be related with both emergent categories in personal and social aspects, regarding the course has an opportunity to learn and a chance of employability. For example:

Yes, I think it will help me to work in restaurants and hotels [Kitchen, 4A];
Yes, I think it will help me to work in restaurants or hotels or even coffee shops [Kitchen, 5A];
Yes it is a way of improve myself and my competencies [Waiter, 8A]
Maybe not, but it is a way to learn something [Hotel Maintenance Operator, 16E];

4. Discussion and conclusions

Most of the young's of our study tend to be in the Moratorium identity dimension. This exploration period shows the importance of helping young people to build an individual's life path, thus the vocational curriculum can be a proactive and preventive measure in the way of adaptability to face moments of transition. Specially youngs that are in a vulnerable situation like our specific participants. Promoting vocational curriculum can be a facilitator of decision making, because it contributes to a greater awareness of the tasks and the discovery of strategies to deal with the unexpected in a current context of life in a constantly changing and global society.

In the future of young people, specially these youngs, that the integration in an EC has the main objective of socialization towards educating "allowing them in the future, lead your life socially and legally responsible" (article 17th, paragraph 1, LTE). These vocational courses in the EC should also be a learning opportunity for the youngs to face the less positive moments in their lives and help them in being more resilient and facing transitions with greater certainty.

In previous works (eg.:Martins & Carvalho, 2013) we discussed the importance of the vocational curriculum. The curriculum of vocational training can enable or empower young people to develop essential skills, to acquire knowledge, and knowing that the curriculum is a powerful way to acquire knowledge (Young, 2011), the knowledge so described assumes interaction and convergence with the curriculum to develop the young's vocational identity.

Acknowledgements

We are grateful for both youngs participation and their institutions, and FCT for funding this research (Foundation for Science and Technology-Contract PTDC/CPE-PEC/121238/2010).

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Çok Kategorili Verilerin Aşamalı Tepki Modeli İle İncelenmesi

Investigation of the Polytomous Data with Graded Response Model

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Özet

Bu araştırmada, Uluslararası Öğrenci Değerlendirme Programı (PISA) 2009 kapsamında uygulanan okuma becerileri öğrenci anketinin “öğretme stratejileri” alt ölçeğinden elde edilen verilen madde tepki kuramı modellerinden aşamalı tepki modeli ile incelenmesi amaçlanmaktadır. Araştırma, Türkiye örnekleminde maddelerin tamamına yanıt veren 4801 öğrencinin cevapları kullanılarak yürütülmüştür. Ankette yer alan 9 madde, çok kategorili madde tepki kuramı modellerinden likert tipi ölçekler için uygun olan aşamalı tepki modeli kullanılarak incelenmiştir. Veri analizinin ilk aşamasında verilerin madde tepki kuramı varsayımlarını sağlayıp sağlamadığı incelenmiş; ikinci aşamada ise MULTILOG 7.03 bilgisayar programında aşamalı tepki modeli ile madde kalibrasyonu yapılmıştır. Araştırmanın sonucunda, model-veri uyumunun sağlandığı görülmüştür. Elde edilen bulgulara göre; ayırt ediciliği en yüksek madde 2.madde ve ayırt ediciliği en düşük maddenin ise 6. madde olduğu görülmüştür.

Anahtar Sözcükler: Madde Tepki Kuramı, Aşamalı Tepki Modeli, PISA 2009

Abstract

In this study, the item scores obtained from “Teacher’s instructional strategies in relation to assignments” part of PISA 2009 Student Survey was examined in respect of the graded response model. The study was carried out with the answers of 4801 students from Turkey. There are 9 items in the survey and 4 response categories an ordinal score ranging from 1 to 4 (1=never or hardly ever, 2=in some lessons, 3=in most lessons ve 4=in all lessons) is assigned to each examinee for each item. The items of the scale was calibrated with the Graded Response Model which is appropriate to Likert type data. In the first step, the data was examined whether the assumptions of IRT model was provided. Next step, we calibrated the items using GRM in MULTILOG 7.03. Then, item discrimination and difficulty parameters were examined for identifying items quality. According to results, seen that model has good fit to data. Findings showed that; item 2 has the highest slope parameter and gives the maximum information, item 6 has the lowest slope parameter and gives the minimum information about students’ attitude to reading.

Keywords: Item Response Theory, Graded Response Model, PISA 2009

GİRİŞ

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- Ölçme, bir betimleme işidir. Geniş anlamda ölçme, belli bir nesnenin ya da nesnelerin belli bir özelliğe sahip olup olmadığının, sahipse sahip oluş derecesinin gözlenip, gözlem sonuçlarının sembollerle ve özellikle sayı sembolleriyle ifade edilmesidir (Tekin, 1996). Değerlendirme ise, ölçme sonuçlarını bir ölçüte vurarak, ölçülen nitelik hakkında bir değer yargısına varma sürecidir (Turgut, 1990). Ölçmelerde gözlenen bir özelliğin gerçek değeri bulunmak istense de ölçmeye karışan çeşitli hatalar yüzünden gerçek değer doğrudan elde edilemez; gözlenen ölçme sonuçları yardımıyla kestirilmeye çalışılır ve bu kestirmeyi yapabilmek için bazı istatistiksel kuramlar geliştirilmiştir (Baykul, 2000).
- Ölçme literatürü incelendiğinde iki *temel* kurama rastlanmaktadır. Bunlardan ilki “Klasik Test Kuramı (KTK)”dır. Psikometri alanında test ve test geliştirme çalışmalarının büyük bir kısmının kuramsal dayanağını oluşturan bu kuramın bazı sınırlılıkları vardır. Bunlar:
 - Madde istatistikleri gruba bağımlıdır, madde istatistikleri farklı gruplarda farklı değerler alır.
 - Madde varyanslarının gruptan gruba değişmesi test istatistiklerini de etkiler. Testin geçerlik ve güvenilirliği de gruptan gruba değişir.
 - Klasik test kuramında aynı testin farklı gruplarından elde edilen madde parametreleri farklı olacağı için, bu grupların puanları karşılaştırılmaz. Karşılaştırmanın yapılabilmesi için paralel testlere ihtiyaç vardır. Ancak paralel testlerin oluşturulması ise pratikte çok zordur.
 - Klasik test kuramına göre geliştirilen testler genellikle orta güçlükte maddelerden oluşur. Test bu açıdan, orta yetenek grubuna hitap eder. Büyük gruplara ve özellikle seçme amaçlı uygulanan testlerde üst ve alt yetenek gruplarındaki yanıtlayıcıların yeteneklerinin kestirilmesinde sınırlı kalır.
- Güvenirlik, grup puanları için tek bir değer olarak, güvenirlilik katsayısı veya ölçmenin standart hatası olarak kestirilir. Bireysel puanlar için ayrı güvenirlilik kestirimi yoktur (Ateşok Deveci, 2008).

Klasik test kuramının yukarıda belirtilen sınırlılıkları sebebiyle bu kurama alternatif olarak ise sonrasında yeni bir kuram ortaya çıkmıştır. Bu kuram “Örtük Özellikler Kuramı (ÖÖK)” veya “Madde Tepki Kuramı (MTK) (Item Response Theory-IRT)” olarak adlandırılmaktadır (Crocker ve Algina, 1986). “Klasik Test Kuramı” psikolojik ölçme tarihinin başlangıcından itibaren test geliştirme, analiz ve psikolojik ölçeklerin puanlanması kullanılmış ve günümüzde de yaygın olarak kullanılmaya devam etmekle birlikte, MTK giderek daha popüler ve tercih edilir olmaya başlamıştır (Hambleton ve Swaminathan, 1985).

Madde Tepki Kuramı’na göre, bireylerin belli bir alandaki doğrudan gözlenemeyen yetenekleri ya da özellikleri ya da bu alanı yoklayan sorulardan oluşan test maddelerine verdikleri yanıtlar arasında bir ilişki vardır ve bu ilişki matematiksel olarak ifade edilebilir. Bu kurama göre geliştirilen testlerden elde edilen yetenek ölçüleri, bireye uygulanan testlerden bağımsız olarak elde edilebilmektedir (Kelecioğlu, 2001). Diğer bir deyişle, veri seti ile seçilen model arasında makul bir uyum sağlandığında, MTK modelleri değişmez madde parametreleri ve yetenek kestirimleri elde etmemizi sağlar (Çelen, 2008).

Bunun yanı sıra madde tepki kuramı ile yeteneği bilinen bir yanıtlayıcının, maddeyi uygulamadan da parametreleri bilinen herhangi bir soruyu doğru yanıtlandırma olasılığı tahmin edilebilir. Klasik test kuramında madde güçlük ve ayırtıcılık gücü indeksleri testin geliştirildiği gruptan kestirilmekte ve grup değiştiğinde değerler de değişebilmektedir. Madde tepki kuramı gruptan bağımsız (sample free) ve değişmez parametre kestirimleri yapma iddiasındadır. Değişmezlik hem aynı özelliği ölçmeye yönelik olarak hazırlanmış olan farklı

maddelere verilen tepkilere dayalı olarak kestirilen yetenek parametrelerinin değişmezliği (test free) hem de aynı testin farklı bireylere uygulanmasıyla elde edilen madde parametrelerinin değişmezliği olarak ele alınabilir. Bu durum, bir testin MTK'ya göre bir kez ölçeklendikten sonra maddelerin özelliği değişmediğinden, pek çok kez kullanılmasına olanak sağlar. Ancak bu değişmezliğin sağlanması, madde parametrelerinin elde edilmesinde yapılan deneme uygulamasının ve bu uygulamanın yapıldığı grubun bazı şartları sağlamasına bağlıdır (Hambleton ve Swaminathan, 1985; Kelecioğlu, 2001). Klasik test kuramında ise bireylerin aldıkları puanlar o testin güçlük düzeyine göre değişmektedir (Lord ve Novic, 1968).

- Klasik test kuramında ölçme hataları tüm grup için hesaplanırken, madde tepki kuramında her birey için ayrı ayrı kestirilebilmektedir. Yine güvenilirlik katsayısı klasik test kuramında cevaplayıcı grubun puan dağılımı için tek bir değer olarak hesaplanırken, madde tepki kuramında her bir madde ve yetenek düzeyi için güvenilirlik madde ve test bilgi fonksiyonu şeklinde hesaplanabilmektedir. Klasik test kuramında elde edilen tek katsayı, güvenilirliğin farklı yetenek düzeyleri için değişmediği anlamına gelmekte iken, tekrarlı ölçmelerle hesaplanan güvenilirlik katsayılarına bakıldığında, bunların ölçülen özelliğe üst düzeyde sahip bireyler için daha yüksek olduğu görülmektedir. Bu durum farklı yetenek düzeyindeki bireyler için ölçme aracının aynı düzeyde güvenilirliğe sahip olamayacağını göstermektedir (Nartgün, 2002).
- Madde tepki kuramının test geliştirme, soru bankası oluşturma, bireye uyarlanmış test geliştirme, madde yanlılığının belirlenmesi, seçenekleri ağırlıklandırma ve test eşitleme konularında karşılaşılan sorunlara çözüm getirdiği iddia edilmektedir (Hambleton & Swaminathan, 1985).
- Kuramın herhangi bir yetenek ölçümünden elde edilen verilere uygulanmasında ve kuramın iddiaları çerçevesinde madde ve yetenek kestirmelerinin elde edilebilmesi için, üç varsayımın karşılanması gerekmektedir (Çıkrıkçı-Demirtaşlı, 1997):
 - 1. Ölçülen psikolojik özelliğin evrende normal dağılım göstermesi
 - 2. Ölçülen psikolojik özelliğin tek boyutlu olması (unidimensionality)
 - 3. Maddelere verilen cevapların yerel bağımsızlığı (local independence)
 -
- Yukarıdaki varsayımların birincisi olan **normallik** varsayımı Klasik Test Kuramı'nın da bir varsayımdır. Normal dağılım şartının sağlanması durumunda Madde Tepki Kuramı'ndaki a ve b parametreleri ile Klasik Test Kuramı'ndaki madde güçlük indeksi (p) ve madde ayırıcılık gücü indeksi (r) arasında geçiş sağlanabilmektedir. Yani, dağılım normal olduğunda Klasik Test Kuramı'ndaki madde istatistiklerinden Madde Tepki Kuramı'ndaki b ve a parametrelerini kestirmek mümkün olabilmektedir (Crocker ve Algina, 1986; Lord ve Novic, 1968; Kelecioğlu, 2001)

Lord ve Novick (1968), **tek boyutluluğu** testi oluşturan maddelerin yalnız tek bir yeteneği ölçmesi, **yerel bağımsızlığı** ise bir maddenin doğru cevaplandırılma olasılığının, testte bulunan diğer maddelere verilen cevaplardan etkilenmemesi olarak ifade etmektedir.

- Tek boyutlu test geliştirme veya bir testin tek boyutluluğunu incelemede, bazı yöntemlerden söz edilir. Bunlardan biri "Lumsden Yöntemi" olarak bilinen, faktör analizine dayalı, tek boyutlu test geliştirmeye yarayan bir yöntemdir. (Hambleton ve Swaminathan, 1985). Tek boyutluluğu belirlemede ikinci bir yol, kesikli iki değişken arasındaki ilişkinin ölçüsünü veren Tetrakorik Korelasyon katsayılarının hesaplanmasıdır. Maddelerin tek boyutluluğu için yeterli koşul, maddeler arası Tetrakorik Korelasyon katsayısı matrisinin tek bir faktöre sahip olmasıdır (Hambleton ve Swaminathan, 1985).

- Yerel bağımsızlık varsayımı ise, tek boyutluluk varsayımı ile paraleldir. Bu sebeple, yerel bağımsızlığın test edilmesinde de faktör analizi teknikleri kullanılmaktadır. Faktör analizi dışında ise, χ^2 tekniği kullanılabilir. Bu tekniğe göre, giderek azalan standart sapma değerlerine göre, dar aralıklarda kalan yetenek gruplarındaki cevaplar her madde çifti için ele alınarak, madde puanlarının bağımsızlığının bir ölçüsü olarak χ^2 istatistiği hesaplanarak, manidarlığı test edilir. (Hambleton ve Swaminathan, 1985).
- Eğitimde, iki kategorili (dichotomous) veya çok kategorili (polytomous) puanlanan verilerin incelenmesi için çeşitli madde tepki kuramı modelleri bulunmaktadır. Bunlardan Rasch modeli, bir, iki ve üç parametrelili lojistik (1PL, 2PL, 3PL) modeller iki kategorili puanlanan veriler için; kısmi puan modeli (partial credit model), aşamalı tepki modeli (graded response model) ve derecelendirme ölçeği modeli (rating scale model) ise çok kategorili puanlanan veriler için örnek olarak verilebilir.
- Madde tepki kuramında kullanılan modellerdeki farklılık, madde karakteristik eğrisinin formülasyonundan veya puanlamadan ileri gelmektedir. İki kategorili puanlanan verilerde kullanılan modeller için, madde karakteristik fonksiyonlarının içerdiği madde parametrelerinin sayısına göre tanımlar yapılmıştır. Bir, iki ve üç parametre kullanan farklı modeller bulunmaktadır (Hambleton & Swaminathan, 1985).

MTK ile hesaplanan madde parametreleri madde ayırt edicilik, madde güçlük ve şans parametresidir. Bir parametrelili model, madde tepki işleyişini betimlemek için bir parametrenin yeterli olduğunu varsayar. Bu da madde güçlüğü (p) karşılayan " b " parametresidir. Maddenin en iyi ölçtüğü yetenek düzeyini de gösterir. Bir parametrelili modelin en önemli sınırlılığı bütün maddelerin eşit ayıricılıkta olduğu varsayımdır. İki parametrelili model bir parametrelili modele ikinci parametreyi eklemiştir. Bu da " a " parametresidir ve madde ayıricılığına (r/x) karşılık gelir. İki parametrelili modelin en önemli sınırlılığı ise şansla doğru cevap verme olasılığını dikkate almamasıdır. Üç parametrelili lojistik model, bir ve iki parametrelili modellere şans parametresi de denilen " c " parametresini eklemiştir (Doğan & Tezbaşaran, 2003). Şansın etkili olduğu testlerin analiz edilmesinde üç parametrelili modelin kullanılması önerilmektedir (Hambleton & Swaminathan 1985).

- Çok kategorili ölçeklerde kullanılan bir model olan "Kısmi Puanlama Modeli (Partial Credit Model)" Masters tarafından geliştirilmiştir. Bu model Rasch modelinin bir uzantısıdır. Bu model de madde basamakları sıra ile tanımlanır, basamakların eşit güçlükte olması gerekmediği gibi güçlüklerine göre sıralanması da gerekmez (Embretson & Reise, 2000).
- Kısmi puanlama modelinden geliştirilen bir diğer model ise "Dereceleme Ölçeği Modeli (Rating Scale Model)"dir. Aynı cevap formatındaki maddeler için dereceleme ölçeği modelinde her madde tek bir ölçek yer parametresi ile tanımlanır. Bu parametre maddenin görece kolaylığını/zorluğunu yansıtmaktadır. Her bir $J=k-1$ kategori eşiği için, ölçülen tüm maddeler üzerinden kategori kesişim parametresi tanımlanır. Tüm maddelerin iyi ayırt ediciliğe sahip olduğu kabul edilir ve her ölçek puanı bireyin yetenek düzeyini kestirmek için yeterlidir (Embretson & Reise, 2000).

Çok kategorili ölçeklerde kullanılan bir diğer model olan "Aşamalı Tepki Modeli (Graded Response Model)" ise Samejima tarafından geliştirilmiştir. Bu model, iki parametrelili lojistik modelin bir uzantısıdır. Bu sebeple tıpkı iki parametrelili lojistik modelde olduğu gibi aşamalı tepki modelinde de her maddeye ait, madde ayıricılığı olarak yorumlanan madde eğim parametresi (a) ve maddenin her bir kategoriye kadar olan kategorilerinin 0,50 olasılıkla yanıtlanması için gerekli düzeyi tanımlayan (kategori sayısı-1 tane) eşik (threshold) parametresi (b) kestirilir. Madde cevapları likert tipi dereceleme ölçeğinde olduğu gibi sıralı

kategoriler şeklinde olduğunda kullanımı uygundur (Embretson & Reise, 2000). Modelde eşik (threshold) kavramı önem kazanmaktadır. Bireyin k'ncı veya daha düşük kategoriye cevaplama olasılığı belirlenmeye çalışır. Maddeye verilecek olası cevap kategorileri sıralanmıştır. Samejima'nın Aşamalı Tepki Modelini, dereceleme ölçeğinden ayırt eden özelliklerden biri, her bir madde için ayrı ayırt edicilik değerinin hesaplanmasıdır. Bir diğer özellik ise her maddedeki kategori eşik değerinin değişmesinden dolayı her bir madde de kategorik eşik değerlerinin hesaplanmasıdır (Erden, 1997).

▪ *Madde ve test bilgi fonksiyonları*

Ölçekte bulunan herhangi bir maddenin ölçeğin bütünüyle yapılan ölçmenin doğruluğuna katkısı madde bilgi fonksiyonu ile belirlenir. Madde bilgi fonksiyonlarının toplamı ile test bilgi fonksiyonu elde edilir (Hambleton & Swaminathan, 1985). Her bir yetenek seviyesinde madde ve test bilgi fonksiyonu hesaplanır. Madde bilgi fonksiyonu, maddenin ölçtüğü yetenek düzeyi (*b*) bireylerin yeteneğine yakın veya eşitse madde hakkında daha fazla bilgi verir. Ayrıca maddenin ayırt edicilik değeri yükseldikçe ve ölçmenin standart hatası azaldıkça madde bilgi fonksiyonu değeri artar. Bilgi fonksiyonu ölçmenin standart hatası ile ters orantılıdır. Madde ve test bilgi fonksiyonu birey örnekleminde bağımsız olarak elde edilebilmektedir. Ayrıca her bir yetenek seviyesinde ölçmenin standart hatasını temsil etmektedir (Nartgün, 2002).

Yöntem

Araştırmanın Türü

Bu araştırma, PISA 2009'da uygulanan okuma becerileri öğrenci anketinin "öğretme stratejileri" alt ölçeğinin madde tepki kuramı modellerinden aşamalı tepki modeli ile olan uyumunun incelendiği betimsel bir çalışmadır.

Çalışma Grubu

Bu çalışmada, PISA 2009'da uygulanan okuma becerileri öğrenci anketinin "öğretme stratejileri" alt ölçeği verilerinden yararlanılmıştır. Çalışma grubunu PISA 2009'a katılan 4801 Türk öğrenci oluşturmaktadır.

Veri Toplama Araçları

- Çalışmada, öğrencilerin PISA 2009 değerlendirmesinde uygulanan öğrenci anketinde yer alan "Teacher's instructional strategies in relation to assignments" ölçeğinde yer alan 9 maddeye verdikleri yanıtlar veri olarak kullanılmıştır. Öğrencilerden, her bir ölçek maddesi için dört kategoriden birine tepkide bulunmaları istenmiştir (1=never or hardly ever, 2=in some lessons, 3=in most lessons ve 4=in all lessons).

Verilerin Analiz

Araştırmada kullanılan verilerin analizi iki aşamada gerçekleştirilmiştir. Öncelikle veri, MTK varsayımları yönünden incelenmiştir. Bu amaçla, ölçülen yapının tek boyutlu olması (unidimensionality) varsayımını sınamak amacıyla yürütülen faktör analizinde SPSS kullanılmıştır. Yapılan analiz sonucu ulaşılan "ölçeğin tek boyutlu olma durumu" ise bize, madde tepki kuramının bir diğer varsayımı olan yerel bağımsızlık varsayımı için de yeterli

kanıtı sağlamaktadır. Bu analizlere dayanarak ölçeğimizin hem tek boyutlu hem de yerel bağımsız olduğu sonucuna ulaşılabilir.

Varsayımların test edilmesinden ardından, MULTILOG programı kullanılarak aşamalı tepki modeli (graded response model) ile madde kalibrasyonu yapılmıştır. Modele ait madde parametreleri Marjinal Maximum Likelihood (MML) yöntemi ile kestirilmiştir.

Bulgular ve Yorum

Madde Tepki Kuramı Varsayımlarının Test Edilmesi

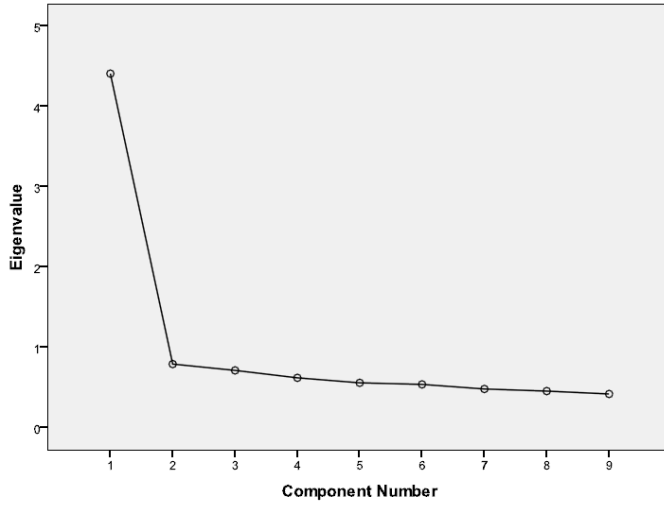
Madde tepki kuramı varsayımlarından biri olan tek boyutluluğu test etmek adına yürütülen faktör analizi sonucuna göre, PISA 2009'da uygulanan okuma becerileri öğrenci anketinin "öğretme stratejileri" alt ölçeğinde yer alan 9 madde, hiçbir maddeyi çıkarmaya gerek kalmadan tek boyutta toplanmıştır. Bu tek boyutta yer alan maddeler tüm ölçeğin %48.9'unu açıklamaktadırlar. Analiz sonucunda elde edilen faktör yükleri Tablo 1'de, öz değerler ise Tablo 2'de verilmiştir. Ayrıca şekil 1'de özdeğerlere ait grafik verilmiştir.

Tablo 1. Faktör yükleri

Maddeler	Faktör Yükleri
i2: (Strategies - Check Concentrating)	,737
i7: (Strategies - Student questions)	,733
i9: (Strategies - Immediate feedback)	,731
i3: (Strategies - Discuss work)	,730
i8: (Strategies - Motivating questions)	,727
i4: (Strategies - Explain judgments)	,726
i5: (Strategies - Ask if understood)	,697
i1: (Strategies - Explain Expectations)	,603
i6: (Strategies - Mark work)	,598

Tablo 2. Öz değerler ve açıklanan varyans

Factors	Eigenvalues			Açıklanan Varyans		
	Total	%Variance	%Cumulative	Total	%Variance	%Cumulative
1	48,993	48,993	48,993	48,993	48,993	48,993
2	,793	8,814	57,807			
3	,714	7,938	65,745			
4	,622	6,911	72,657			
5	,560	6,220	78,876			
6	,540	6,002	84,878			
7	,483	5,367	90,246			
8	,457	5,076	95,322			
9	,421	4,678	100,000			



Şekil1. Scree Plot

MTK'nın bir diğer varsayımı yerel bağımsızlıktır. Yerel bağımsızlık, bir bireyin bir testteki farklı maddelere verdiği cevapların birbirinden istatistiksel olarak bağımsız olması demektir. Bu varsayımın doğru olması için bir bireyin, bir maddedeki performansının diğer maddelerdeki performansını etkilememesi gerekir. Bu varsayımın ihlali aynı zamanda tek boyutluluk varsayımının da ihlali demektir. Yerel bağımsızlık, maddeler arası ilişkilerin açıklanması için sadece bir yeteneğin yeterli olması demektir (Hambleton ve Swaminathan, 1985). Dolayısıyla tek boyutluluk varsayımını sağlayan tutum ölçeğindeki 9 maddenin yerel bağımsızlık varsayımını da sağladığı kabul edilmiştir.

Aşamalı Tepki Modeli Sonucunda Elde Edilen Çıktıların Yorumlanması

PISA 2009'da uygulanan öğrenci anketinde yer alan "Teacher's instructional strategies in relation to assignments" ölçeğine verilen yanıtlar, madde tepki kuramının aşamalı tepki modeline göre MULTILOG programı kullanılarak analiz edilmiştir.

Yapılan analiz sonucunda, ölçekte yer alan 9 maddenin aşamalı tepki model için kestirilen madde ayırt edicilik ve eşik parametreleri ve bunların standart hata değerleri Tablo 3'te verilmiştir.

Tablo 3. Aşamalı Tepki Modeli için Kestirilen Madde Parametreleri

Items	α_i (SE)	β_1 (SE)	β_2 (SE)	β_3 (SE)
1	1.32 (0.04)	-2.37 (0.09)	-0.12 (0.03)	1.47 (0.06)
2	2.08 (0.06)	-2.12 (0.06)	-0.47 (0.03)	0.98 (0.03)
3	2.03 (0.06)	-1.94 (0.06)	-0.26 (0.03)	1.17 (0.04)
4	1.96 (0.05)	-2.09 (0.06)	-0.39 (0.03)	1.00 (0.04)
5	1.77 (0.05)	-1.77 (0.05)	-0.31 (0.03)	0.92 (0.04)
6	1.31 (0.04)	-2.78 (0.10)	-0.65 (0.04)	0.91 (0.05)
7	2.06 (0.06)	-2.05 (0.06)	-0.51 (0.03)	0.80 (0.03)
8	2.02 (0.06)	-1.92 (0.05)	-0.44 (0.03)	0.85 (0.03)
9	2.01 (0.05)	-1.66 (0.05)	-0.11 (0.02)	1.17 (0.04)

- Tablo 3 incelendiğinde, ilk sütunda madde numaraları ve ikinci sütunda “ α ” ile gösterilen ayırt edicilik parametre değeri görülmektedir. Eğitim parametresi, madde ile ölçülmek istenen yetenek arasındaki güçlü ilişkiyi yansıtır. Bu bağlamda pozitif ve yüksek eğitim değerleri tercih edilir. Baker (2001, s.35), maddelerin ayırt edicilik parametre değerlerine göre çok düşük (0.01-0.34), düşük (0.35-0.64), orta (0.65-1.34), yüksek (1.35-1.69) ve çok yüksek (>1.70) ayırtıcılığa sahip maddeler olarak sınıflandırılabilceğini belirtmiştir.
- Tablo 3 incelendiğinde 1 ve 6. maddeler orta düzeyde ayırt ediciliğe sahip iken geriye kalan 7 maddenin çok yüksek ayırt ediciliğe sahip olduğu söylenebilir. Diğer bir ifadeyle, tablonun geneline bakıldığında ise, tüm maddelerin ayırt edicilik katsayıları 1’in üzerinde olduğu için, ayırt edicilik bakımından tüm maddelerin kabul edilebilir olduğu söylenebilir. Tüm maddeler içerisinde 2. maddenin “The teacher checks that students are concentrating while working on the <reading assignment>” en yüksek ($\alpha_i=2.08$), 6. maddenin “The teacher marks students’ work” ise en düşük ($\alpha_i=1.31$) eğitim parametresine sahip olduğu görülmektedir.
- Her bir maddeye ilişkin eşik parametreleri “ β_i ” ile gösterilip Tablo 3’ün son üç sütununda yer almaktadır. β_i , öğrencilerin 0.50 olasılıkla eşik değerinin üzerinde cevap vermek için gerekli olan tutum düzeyini gösterir (Matteucci ve Stracqualursi, 2006). Buna göre bir öğrencinin ilk kategoriye cevaplama için düşük yetenek ya da tutuma sahip olması yeterli olmakta iken, bir üst kategori için daha yüksek tutum gerekmektedir. Kategori arası eşik parametreleri, -2.78 ile 1.47 değerleri arasında değişmektedir. Eşik parametre değerlerinin çoğunun negatif değerler almasına dayalı olarak kategorilerdeki cevapların daha çok tutumun düşük düzeyi ($\theta < 0$) tarafından desteklendiği söylenebilir.
- Ölçeğimizde, 4’lü likert tipi maddeler bulunmaktadır. Bu sebeple, kategoriler arası eşik parametre değeri β_1 , β_2 ve β_3 olmak üzere 3 tanedir. Aşamalı tepki modeline göre bir maddedeki eşik parametre değerlerinin sıralı olması gerekir (Embretson & Reise, 2000). Tablo 3’e bakıldığında bütün maddelerde bu durum sağlanmaktadır.
- Eşik parametre değerlerinin (-3.0, +3.0) aralığında olması da beklenen bir durumdur (Referans ver). Tablo 3’teki maddeler incelendiğinde, hiçbirinin bu sınırların dışına çıkmadığı gözlenmektedir. Yani ölçekte yer alan 9 maddeye, çalışma grubunda yer alan 4801 öğrencinin hiçbirisi uç seçenekleri (extreme options) işaretlememişlerdir.

Ölçeğe ilişkin marjinal güvenilirlik katsayısı 0.8826 olarak elde edilmiştir. Marjinal güvenilirlik, tüm yetenek düzeyindeki öğrencilerden tahmin edilen koşullu standart hatalarının ortalaması olarak ele alınan toplam güvenilirliği temsil etmektedir (DCAS 2010–2011, Technical Report). PISA 2009’da uygulanan okuma becerileri öğrenci anketinin “öğretme stratejileri” alt ölçeğinin güvenilirliği kabul edilebilir düzeydedir.

MULTILOG programı beklenen ve gözlenen cevap oranlarını da vermektedir. Gözlenen ve beklenen oranlar arasındaki farklar “artık” olarak da isimlendirilir. Embretson ve Reise (2000), artıkların sifıra yaklaşmasının (<0.01) modelin veri ile uyum gösterdiğinin bir ölçütü olarak alınabileceğini belirtmiştir. Beklenen ve gözlenen değerler arasındaki fark bize modelin gerçek madde tepkilerini ne kadar iyi yordadığına ilişkin bilgi verir. Elde edilen çıktı incelendiğinde, aşağıdaki Tablo 4’e ulaşılmaktadır. Bu tablo incelendiğinde bütün maddeler için her bir kategoride beklenen ve gözlenen değerler arasındaki farkların çok büyük olmadığı görülmektedir. Gözlenen ve beklenen değerler arasındaki farkların hepsi 0.01’den düşük çıkmıştır. Bu da model uyumunun niteliğinin iyi düzeyde olduğunu göstermektedir.

(Embretson ve Reise, 2000). Bu bulguya dayalı olarak ATM modelinin veriye uyum gösterdiği söylenebilir.

Tablo 4. Beklenen ve gözlenen oranlar

Item	Answer Ratio	Category			
		1	2	3	4
1	Gözlenen	0.0750	0.3945	0.3462	0.1843
	Beklenen	0.0775	0.3938	0.3437	0.1850
2	Gözlenen	0.0504	0.3001	0.4272	0.2222
	Beklenen	0.0541	0.3051	0.4152	0.2256
3	Gözlenen	0.0683	0.3487	0.3980	0.1850
	Beklenen	0.0729	0.3487	0.3912	0.1872
4	Gözlenen	0.0573	0.3220	0.3958	0.2250
	Beklenen	0.0610	0.3232	0.3881	0.2276
5	Gözlenen	0.1000	0.3076	0.3395	0.2529
	Beklenen	0.1045	0.3062	0.3350	0.2543
6	Gözlenen	0.0475	0.2899	0.3770	0.2856
	Beklenen	0.0499	0.2937	0.3693	0.2872
7	Gözlenen	0.0569	0.2810	0.3943	0.2679
	Beklenen	0.0605	0.2865	0.3834	0.2696
8	Gözlenen	0.0704	0.2899	0.3824	0.2572
	Beklenen	0.0750	0.2929	0.3724	0.2597
9	Gözlenen	0.1002	0.3655	0.3478	0.1864
	Beklenen	0.1060	0.3603	0.3450	0.1888

Öğretme stratejisinin kullanımına ilişkin düzeylerinin (-3, +3) arasındaki toplam test bilgisi değerleri ve bu değerlerin standart hataları Tablo 5’te, test bilgi fonksiyon grafiği ise Şekil 2’de verilmiştir.

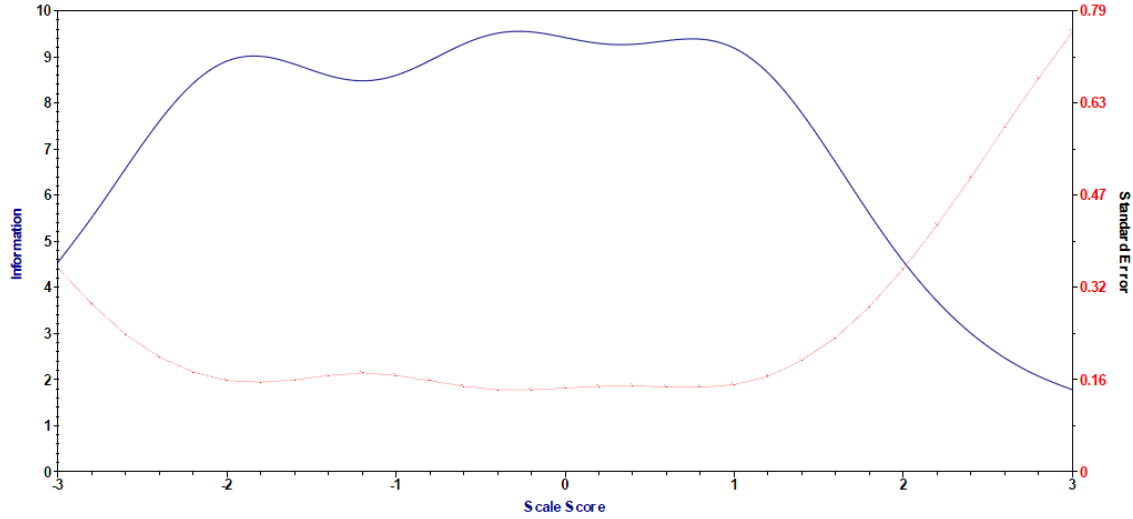
Tablo 5. Test bilgi fonksiyonu değerleri ve standart hataları

Toplam Test Bilgisi										
Örtük Özellik Düzeyi			Test Bilgi Fonksiyonu							
-3.0	-	-1.6	4.537	5.510	6.571	7.596	8.421	8.903	9.006	8.834
-1.4	-	0.0	8.590	8.475	8.595	8.911	9.272	9.507	9.535	9.413
0.2	-	1.6	9.286	9.266	9.343	9.378	9.184	8.646	7.777	6.705
1.8	-	3.0	5.591	4.564	3.695	3.001	2.468	2.070	1.776	1.8
Örtük Özellik Düzeyi			Standart Hata							
-3.0	-	-1.6	0.469	0.426	0.390	0.363	0.345	0.335	0.333	0.336
-1.4	-	0.0	0.341	0.344	0.341	0.335	0.328	0.324	0.324	0.326
0.2	-	1.6	0.328	0.329	0.327	0.327	0.330	0.340	0.359	0.386
1.8	-	3.0	0.423	0.468	0.520	0.577	0.637	0.695	0.750	1.8

- Yukarıda verilen Tablo 5 incelendiğinde, PISA 2009’da uygulanan okuma becerileri öğrenci anketinin öğretme stratejileri alt ölçeğinin en fazla bilgi verdiği yetenek düzeyi -0.2, en az bilgi verdiği yetenek düzeyi ise 3.0’tür. Bu düzeylerde elde edilen standart hata değerlerine bakıldığında ise; en fazla bilginin verildiği -0.2 yetenek

düzeyindeki standart hata en düşük (0.324), en az bilginin verildiği 3.0 yetenek düzeyindeki standart hata ise en yüksektir (0.750).

MULTILOG çıktısından elde edilen bir diğer değer ise -2loglikelihood değeridir. Bu değer 11175.1 olarak elde edilmiştir. Embretson ve Reise (2000) bu değer model-veri uyumu değerlendirilmesinde kullanılmasının uygun olmadığını belirtmişlerdir. Bu değer eldeki verinin hangi model ile daha uyumlu olacağının araştırıldığı çalışmalarda kullanılmalıdır.



Şekil 2 .Test bilgi fonksiyonu grafiği

Sonuç

- Çalışma kapsamında PISA 2009'da uygulanan okuma becerileri öğrenci anketinin "öğretme stratejileri" alt ölçeğinde yer alan 9 madde kullanılmıştır. Öncelikle madde tepki kuramı varsayımlarını karşılayıp karşılamadığını belirlemek adına SPSS programı ile yürütülen faktör analizi sonucu, ölçek tek boyutlu çıkmıştır. MULTILOG programı ile de aşamalı tepki modeline göre öğretme stratejileri ölçeğinin eğim ve eşik parametreleri, marjinal güvenirlik katsayısı ve test bilgi fonksiyonları elde edilmiştir.
- MULTILOG çıktıları incelendiğinde;
- Ayırt ediciliği en yüksek madde 2.madde ve ayırt ediciliği en düşük maddenin ise 6. maddedir. Tablonun geneline bakıldığında ise, tüm maddelerin ayırt edicilik katsayıları 1'in üzerinde olduğu için, ayırt edicilik bakımından tüm maddelerin kabul edilebilir.
- Eşik parametre değerleri sıralı çıkmıştır. Bu durum örtük özellik ile maddelerin ilişkisini göstermektedir.
- Eşik parametre değerleri (-3.0, +3.0) aralığında çıkmıştır. Yani ölçeği cevaplayan bireyler çok fazla uç değerlere yönelmemiştir.
- Güvenirlik katsayısı 0.8826 olarak bulunmuştur ve ölçeğinin güvenirliği kabul edilebilir düzeydedir.
- Modelin gerçek madde tepkilerini ne kadar iyi yordadığına ilişkin bilgi veren gözlenen ve beklenen oranlar arasındaki fark 0.01'den düşük çıkmıştır.
- Beklenen ve gözlenen değerler arasındaki fark bize modelin gerçek madde tepkilerini ne kadar iyi yordadığına ilişkin bilgi verir. Bu da model uyumunun niteliğinin iyi düzeyde olduğunu gösterir.
- Ölçeğinin en fazla bilgi verdiği yetenek düzeyi -0.2, en az bilgi verdiği yetenek düzeyi ise 3.0'tür.

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INTE 2014